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JOINT FORCES STAFF COLLEGE
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THE AIRMAN AND THE STATE:
AN F-22 PILOT'S PERSPECTIVE ON CIVIL-MILITARY RELATIONS

by

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A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy. The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

This paper is entirely my own work except as documented in footnotes.

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ABSTRACT

The F-22 case study demonstrates how adherence to current civil-military relationship models creates discord and can lead to a sub-optimization of national strategy. Throughout the case study, Department of Defense (DoD) civilian leadership exercised their prerogative to discount and undervalue Air Force military advice, ultimately overruling the Air Force as to the future of the program. Conversely, Air Force leaders viewed their management of the F-22 program as part of their Title 10 responsibilities to organize, train and equip the Air Force. To senior Air Force officials, DoD leaders demonstrated either bias or ignorance of Air Force requirements. The dissonance between these two viewpoints suggests the need to replace traditional civil-military relations constructs with a collaborative norm. History shows that when collaboration occurs between civilian and military leaders, strategy is more coherent and outcomes are more optimal.

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To my wife, Shannon, thanks for putting up with the late nights and missed weekends (again). And to my son, Justin, I promise I'll return the favor of unconditional support when you go get your masters in about 20 years!

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CHAPTER 1

INTRODUCTION

The recent decision to terminate F-22 Raptor production provides a unique opportunity for scholars and military professionals to re-evaluate both the validity and utility of contemporary theories of civil-military relations.¹ While others have examined civil-military relations in a wartime context,² scholars have largely neglected peacetime interactions.³ This gap is significant, as civil-military relations do not cease during peacetime. Indeed, decisions made in peacetime can have a greater impact on national security over the long haul than decisions made during the crucible of war. Samuel Huntington provided the standard model for evaluating civil-military relations in his seminal work, *The Soldier and the State*, arguing in favor of separate spheres of civilian and military competence.⁴ Unfortunately, an analysis of the events leading up to the peacetime decision to terminate F-22 production confirms what others have seen in their wartime-focused studies: this standard model for civil-military relations does not comport with reality.

Sensing the growing inadequacy of the normative model of civil-military relations, others have offered alternatives. The primary contender in this regard is “agency theory.” This construct, put forth by Professor Peter Feaver of Duke University,

¹ The official designation of the F-22 is the F-22A. From September 2002 to December 2005, the Air Force designated the aircraft as the F/A-22 to highlight its air-to-ground capabilities, and then reverted to F-22A again. I will use the shorthand “F-22” throughout to refer to either designation as the aircraft configuration did not change despite the re-designations.

² For example, see Hew Strachan, “Making Strategy: Civil-Military Relations after Iraq,” *Survival* 48, no. 3, 79, and Eliot A. Cohen, *Supreme Command* (New York: Random House, 2002).

³ One notable exception is A. J. Bacevich, “The Paradox of Professionalism: Eisenhower, Ridgeway, and the Challenge to Civilian Control, 1953-1955,” *The Journal of Military History* 61, vol. 2 (April 1997).

⁴ Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (New York: Vintage Books, 1957). Future citations will be from the 2005 Belknap Press edition.

builds on a principal-agent framework to describe civil-military interactions.⁵ While an in-depth look at the details of the decision to terminate F-22 production validates the descriptive (and potentially predictive) value of agency theory, it also reveals a major shortcoming: the potential for inefficient and suboptimal decision making.

A major component of a theory's value is whether or not it accurately describes (or predicts) events when properly tested. Both Huntington's standard model and Feaver's agency theory have value in this regard.⁶ The value of their theories, however, is separate and distinct from their value in defining norms, those "principle[s] of right action binding upon members of a group and serving to guide, control, or regulate proper behavior."⁷ Unfortunately, the shortfalls of the Huntington and Feaver constructs reveal the need for a new norm—although perhaps not a new theory—for civil-military relations. This normative model should focus on two broad areas: capitalizing on the radically different competencies of senior civilians and military officers, and optimizing relationships between these two groups. Neither Huntington nor Feaver adequately address these two criteria, both of which are necessary for coherent and effective strategy development. Thus, a new normative model addressing these two areas would do much to further the pursuit of a strong national defense.

The F-22 in the Civil-Military Relations Construct

As causes go, the United States Air Force perceived none more important to its primary mission than acquiring an adequate fleet of F-22 Raptors. In October 1999, as

⁵ Agency theory is described in detail in Peter D. Feaver, *Armed Servants: Agency, Oversight, and Civil-Military Relations* (Cambridge: Harvard University Press, 2005). This theory will be discussed in more detail below.

⁶ For a complete discussion of what constitutes a "good theory," see Stephen Van Evera, *Guide to Methods for Students of Political Science* (Ithaca, New York: Cornell University Press, 1997), 17-20.

⁷ Merriam-Webster online dictionary, <http://www.merriam-webster.com/dictionary/norm> (accessed 21 January 2010).

part of his after action report on the air war over Kosovo, future Air Force Chief of Staff General John P. Jumper told Congress that “[w]ithout the F-22, we cannot guarantee that we will own the sky—if we do not own the sky, success in any military operation is in jeopardy.”⁸ Airmen are proud of the fact—indeed, embrace it as a sacred trust—that “[n]o American soldier has been attacked on the ground by an air-breathing vehicle since 1953.”⁹ The Air Force's enthusiasm for acquiring the Raptor in robust numbers was always less a manifestation of a dominant fighter pilot culture than a commitment to the continued ability to maintain that sacred trust. Committed to this trust, the Air Force demonstrated indifference to senior Department of Defense (DoD) civilian criticism of the F-22. Accordingly, the service did not alter its basic position with respect to the need for more Raptors for the next decade, with Air Force Chiefs of Staff continuing to advocate for increased production of the F-22 until as late as February 2009.¹⁰

In the end, these efforts were to no avail. On 6 April 2009, Secretary of Defense Robert Gates, citing a broken acquisition process and questionable relevancy, asked Congress to terminate F-22 production at 187 aircraft.¹¹ Although this number was significantly lower than the Air Force's long-standing requirement for 381 aircraft, the service's leadership abandoned the cause shortly thereafter.¹² While many F-22 critics

⁸ House Armed Services Committee, *Statement of General John Jumper on Operations in Kosovo: Problems Encountered, Lessons Learned and Reconstitution*, 26 October 1999, <http://www.fas.org/man/congress/1999/99-10-26jumper.htm> (accessed 23 September 2009).

⁹ General Ronald R. Fogleman, “Aerospace Doctrine: More than Just a Theory,” *Airpower Journal* (Summer 1996): 44.

¹⁰ Amy Butler, “USAF Chief Notes F-22s Are Needed, Defends Capabilities,” *Aerospace Daily & Defense Report*, 18 February 2009, <http://www.aviationweek.com/aw/generic/story.jsp?id=news/F22s021709.xml&headline=USAF%20Chief%20Defends%20F-22%20Need,%20Capabilities&channel=defense> (accessed 23 September 2009).

¹¹ Department of Defense, Office of the Assistant Secretary of Defense for Public Affairs (OSD/PA), “DoD News Briefing with Secretary Gates at the Pentagon,” 6 April 2009, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4396> (accessed 23 September 2009).

¹² Secretary of the Air Force Michael Donley and General Norton Schwartz, “Moving Beyond the F-

questioned the relevance of a jet conceived during the Cold War, the events leading up to the decision to halt Raptor production suggest a need to examine the relevance of a much broader Cold War-era concept: Huntington's prescriptive model for objective control in civil-military relations. While critiques of Huntington's model abound and agency theory offers a compelling alternative, no one yet has provided an adequate prescription for a new norm to govern U.S. civil-military relations.

Shortcomings in Contemporary Civil-Military Relations Constructs

At the height of the Cold War, Huntington struggled with the question of how the U.S. could maintain a military capable of deterring and, if necessary, fighting the Soviet Union while at the same time not losing civilian control over such a powerful military organization. To resolve this dilemma, Huntington argued the United States must adopt a model of objective control. This construct created an implied contract whereby society would grant the military autonomy within its sphere and in return the military would eschew engagement in political activity. For Huntington, the antithesis of the ideal of objective control was subjective control. This method of exerting civilian control consists of maximizing civilian power relative to the military. Civilians might achieve this through the creation of paramilitary organizations loyal to their particular political entity, or by "infiltrating the military hierarchy with independent chains of command."¹³ Often attempts at subjective control pitted different civilian institutions (e.g., the Crown and the Parliament, the Executive and Legislative branches, or different bureaucracies within the government) against one another, with the military merely serving as a political pawn in their quest for power. According to Huntington, this was dangerous in

22," *Washington Post*, 15 April 2009.

¹³ Huntington, *The Soldier and the State*, 80-83. Quote is from 82.

the face of a highly capable enemy because it eroded the power and strength of the military. Fortunately for Huntington, the advent of a professional officer corps made subjective control unnecessary as a means of exerting civilian authority.¹⁴

Professionalism enabled objective control because it rendered the military “politically sterile and neutral.”¹⁵ The logical outcome of this sterility and neutrality was the existence of two separate spheres of competency. According to Huntington, professional military officers “have specialized competence within their field and lack that competence outside their field.”¹⁶ This formula put politics “beyond the scope of military competence.”¹⁷ Similarly, Huntington put military affairs beyond the scope of civilian competence.¹⁸ Figure 1 provides a visual depiction of Huntington’s model of objective control. It shows two separate spheres, with the civilian sphere of competency (political) ascendant over the military sphere. No overlap exists between the two. Indeed, the only interaction between the civilian and military spheres is the downward transmission of policy from civilians to the military.¹⁹

¹⁴ Ibid.

¹⁵ Ibid., 84.

¹⁶ Ibid., 70.

¹⁷ Ibid., 71.

¹⁸ Ibid., 308.

¹⁹ Huntington examines and then debunks the possibility of overlap in his discussion of fusionist theory. See Ibid., 350-354. I will deal with this concept in more detail in Chapter 4.

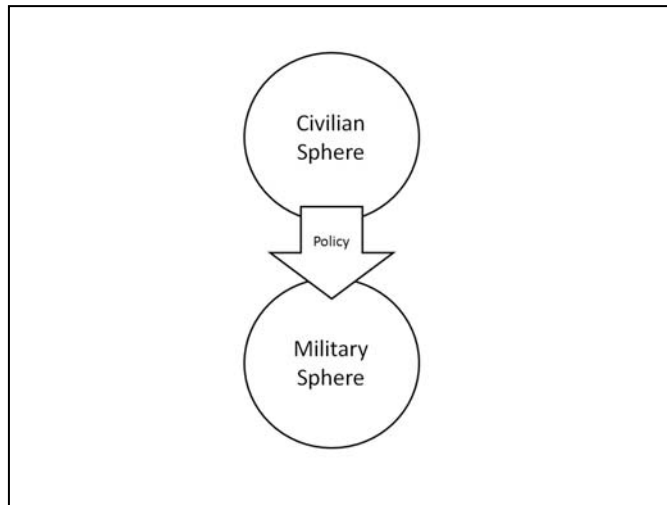


Figure 1. Huntington's Objective Control

Unfortunately, Huntington's idea (and ideal) of objective control suffers from two critical flaws. First among these is a purported link between the nature of society and the military profession. Huntington argued that if objective control was to succeed in the high threat environment of the Cold War, this required a "weakening of liberalism."²⁰ In other words, American society needed to move closer to the conservative values of the military profession. In 1977, Huntington revisited his argument and evaluated it in light of the events of the intervening 20 years of the Cold War. He found that, despite the Vietnam War and the social events of the 1960s and 1970s, "liberal antimilitary presuppositions and attitudes were at least temporarily weakened or suppressed, thus resolving in some measure the tension between military security and the liberal society."²¹ Yet it is unclear whether or not this was indeed the case. Huntington's argument falls victim to tautology. He cites the publication of his book, *The Soldier and*

²⁰ Ibid., 456.

²¹ Samuel Huntington, "The Soldier and the State in the 1970s," in *Civil-Military Relations*, ed. Samuel Huntington and Andrew J. Goodpaster (Washington, DC: American Enterprise Institute for Public Policy Research, 1977), 11.

the State, as evidence of the changing attitudes he commended to the American public within the book itself.²² Furthermore, subsequent research suggests a widening of the “civil-military gap” in the wake of Vietnam and through the end of the Cold War as the military increasingly became a bastion of conservatism in an otherwise liberalizing society.²³

The second and more fatal flaw for Huntington, however, is that his thesis does not withstand exposure to the empirical evidence. Eliot Cohen has shown successful wartime civilian leaders seldom followed Huntington’s prescription for a separate military sphere. Cohen examined the wartime leadership of Abraham Lincoln, Georges Clemenceau, Winston Churchill, and David Ben-Gurion. He found that “[f]ar from the simplistic convention of the ‘normal’ theory of civil-military relations ... the practice of these men was interaction throughout a conflict.”²⁴ Others have shown that during the Cold War civilians had little compunction against direct management of nuclear weapons policy and procedures.²⁵ In minor incidents, such as the 1968 *Pueblo* crisis, President Johnson spoke “directly with the on scene commanding officer.”²⁶ In major incidents, such as the Korean and Vietnam Wars, civilian intrusion into military strategy and tactics occurred more often than not. President Truman fired General MacArthur for continuing

²² Ibid.

²³ Russell F. Weigley, “The American Civil-Military Cultural Gap: A Historical Perspective, Colonial Times to the Present,” in *Soldiers and Civilians: The Civil-Military Gap and American National Security*, ed. Peter D. Feaver and Richard H. Kohn (Cambridge, MA: MIT Press, 2001), 238-239, 246.

²⁴ Cohen, *Supreme Command*, 209. Interestingly, Cohen also takes a brief look at Rumsfeld’s various interventions leading up to the 2003 invasion of Iraq and concludes his intervention also led to victory. In a sense this is accurate, but as we now know the initial overthrow of the Iraqi government preceded a long and arduous learning process for which neither civilian nor military leadership was intellectually prepared.

²⁵ Peter D. Feaver, *Guarding the Guardians: Civilian Control of Nuclear Weapons in the United States* (Ithaca: Cornell University Press, 1992).

²⁶ Peter D. Feaver, “An Agency Theory Explanation of American Civil-Military Relations during the Cold War,” Working Paper for the Program for the Study in Democracy, Institutions and Political Economy, Duke University, 5 November 1997, 37, <http://www.poli.duke.edu/dipe/Feaver1.pdf> (accessed 10 December 2009).

to push an alternative strategy.²⁷ Secretary of Defense McNamara's micromanagement of the conflict in Southeast Asia is well-known.²⁸ Even the exceptions prove the rule. The military viewed President Reagan's refusal to meddle in the details of the Grenada invasion as a welcome change from the past,²⁹ and it appreciated President George H. W. Bush's technique for civilian control of the military during Operation Desert Storm, where he "provided broad policy guidance and left it to his professional military officers to devise the appropriate strategy and tactics to achieve those ends."³⁰

In 2003, noting the inconsistency between Huntington's model and reality, Duke University political scientist Peter Feaver offered an alternative to Huntington's normative thesis. Building on the principal-agent construct, Feaver argued the military (agent) was more apt to comply with civilian (principal) guidance when civilian monitoring of military actions increased and when the likelihood of negative consequences for failing to implement the principal's guidance rose.³¹ Classic principal agent models describe an employer (principal) hiring an employee (agent) to do work and address the problems the employer has in ensuring that work actually gets done. Problems begin during the hiring process, where the job seeker "has an incentive to appear more diligent than he really is" and continue on the job site, where "the employee has an incentive to do as little work as he can get away with...."³² When the employee is

²⁷ For an in-depth look at this decision, see John W. Spanier, *The Truman-MacArthur Controversy and the Korean War* (New York: W.W. Norton, 1965).

²⁸ For example, see Dale R. Herspring, *The Pentagon and the Presidency: Civil-Military Relations from FDR to George W. Bush* (Lawrence, Kansas: University of Kansas Press, 2006), 153-154.

²⁹ J-3/OPD Joint Overview, 1 May 85, Joint History Office Files, quoted in Ronald H. Cole, *Operation Urgent Fury: Grenada* (Washington, DC: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, 1997), 68. See also 39-40.

³⁰ Herspring, *The Pentagon and the Presidency*, 329.

³¹ Feaver, *Armed Servants*, 56.

³² *Ibid.*, 55

fulfilling his or her responsibilities to the employer, he or she is working; when the employee is doing anything else, he or she is shirking.³³

Importantly, Feaver recognized the pitfalls of using an economic framework in the context of civil-military relations. Civilian political leaders and military professionals share the objective of providing for the defense of the nation, which is radically different from an economic context. Still, Feaver argued, this shared objective does not necessarily mean civilian and military preferences always align. Thus, “working” and “shirking” are still possible in the military context. The former is defined as “doing things the way civilians want” and the latter is “doing things the way those in the military want.”³⁴ Divergent civilian and military preferences have several sources. Military officers may want more resources or they might object to civilian interference in military operations. Conversely, civilian leaders may have other priorities for resources or they might feel compelled to intervene in a military operation, particularly if it is going poorly.³⁵

Another problem inherent in using a principal-agent framework for civil-military relations is the advisory role of the military. As Feaver puts it, “[w]orking does not imply that the military immediately and dutifully executes every harebrained scheme that issues from the mouth of any civilian policymaker.”³⁶ Indeed, the law requires and common sense obliges senior military leaders to offer their best advice to their civilian masters,

³³ Like Feaver, I recognize the terms “work” and, in particular, “shirk” have colloquial connotations and carry baggage, particularly in military discourse. However, also like Feaver, I found no other terms any less burdensome. See *Ibid.*, 3, 59.

³⁴ *Ibid.*, 60.

³⁵ *Ibid.*, 60-62.

³⁶ *Ibid.*, 62.

regardless of the civilian preference.³⁷ Of course, if and when military preferences differ from civilian preferences, the military could offer exaggerated advice in order to influence the policy discussion. This action, according to Feaver, would qualify as shirking, as would more direct challenges to civilian control. Ultimately, Feaver argues,

civilian political leaders have the right to ask for things in the national security realm that are ultimately not conducive to good national security. The military should advise against such policies, but the military should not prevent those policies from being implemented.³⁸

The problem with this statement is that creates a structural impediment to the development of coherent strategy by limiting the military role in the development of national security strategy to merely advising against foolishness.

More comprehensive and effective strategy could result if experts on military matters (i.e., military leaders) participated and collaborated with their civilian superiors during the development of strategy. Despite the fact that agency theory would allow civilian leaders to circumscribe the military role in developing strategy, the theory does not preclude a more collaborative and efficient relationship. Indeed, the idea that an inefficient relationship between principal and agent can lead to failure is inherent in Feaver's construct. In the classic economic principal-agent model, this mean the employer does not make as much money, or, in the worst case, his business goes under. In agency theory for civil-military relations, the results could be more hazardous. Indeed, in the worst of cases, suboptimal civil-military relationships could lead to "collapse on

³⁷ U.S. Code, Title 10, Subtitle A, Part I, Chapter 5, §151 and §153.

³⁸ Feaver, *Armed Servants*, 63, 65. Quote is from 65.

the battlefield or military overthrow of the government.”³⁹ A host of less calamitous, but equally serious, national defense outcomes lie between these two extremes.

Where agency theory comes up short is in its failure to resolve the enduring dilemma of civil-military relations: how to maintain a capable military that is unthreatening to the society it is meant to protect. Feaver is aware of agency’s theory’s shortcoming in this area, noting it focuses primarily on “the mechanisms for implementing civilian control over the military” and less on “how civilian control might affect the ability of the military to carry out its functional role to defend and advance the national interest.”⁴⁰ Where Huntington offered objective control as a way to maximize both military capability and civilian control, however, Feaver views the question differently. Shortly after asking the broad question as to whether or not agency theory “is a good thing for the polity,” Feaver rewords the question. “Put another way,” he asks, “what are the costs of maintaining civilian control?”⁴¹

Ultimately for Feaver, the costs are worth it. He argues passionately that, in a democratic society, “civilians have the right to be wrong.”⁴² For Feaver, this is not so much a conclusion, but an underlying assumption of democratic governance. In the case of a civil-military dispute, “even when the military is right, democratic theory intervenes and insists that it submit to the civilian leadership that the polity has chosen.”⁴³ Thus, Feaver’s model graphically depicted would appear as in Figure 2. While a separate military sphere exists, the civilian sphere, by definition, subsumes it. As the entire sphere

³⁹ Ibid., 59.

⁴⁰ Ibid., 298.

⁴¹ Ibid., 283.

⁴² Ibid., 298.

⁴³ Ibid., 302.

of military competence lies within the civilian sphere, civilians have the right (and perhaps even the obligation) to intervene in military matters whenever they see fit to do so.

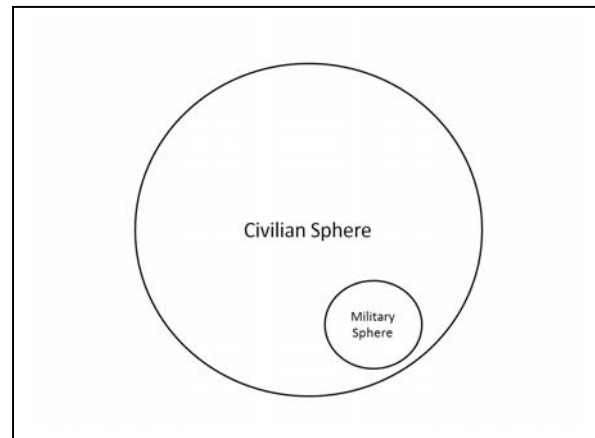


Figure 2. Feaver's Agency Theory

If and when elected civilian leaders get strategy wrong, the voters—not the military—are responsible for rectifying the situation. In the end, Feaver concludes, “[t]he republic would be better served by foolish working than by enlightened shirking.”⁴⁴ Unfortunately, this conclusion sidesteps the broader questions Feaver himself asked: what are the costs of agency theory, and is agency theory good for the public? A study of the events leading up to the decision to terminate F-22 production at 187 aircraft can help answer these questions.⁴⁵ Furthermore, with both Feaver's agency theory and Huntington's objective control falling short of the mark in the quest for a prescriptive

⁴⁴ Ibid.

⁴⁵ An effort to answer this question in a *wartime* context might examine the failure of the George W. Bush Administration, and particularly of Secretary of Defense Don Rumsfeld, to acknowledge the existence of an insurgency in Iraq even when most, but not all, military officers agreed that was what Coalition forces faced by late 2003. In hindsight, the Administration's delay in acknowledging this fact was not a good thing for either the United States or Iraq. For an in-depth discussion of this dynamic, see Bob Woodward, *State of Denial* (New York: Simon and Schuster, 2004).

norm that enables optimum strategy development, the F-22 case study will help assess the need—and outline the solution—for a new collaborative model of civil-military relations.

The F-22 as a Case Study

The F-22 case is different from much of the existing civil-military relations literature. Most in-depth studies of civil-military relations primarily examine wartime events. Yet, while the United States was at war when the Secretary of Defense made the decision to terminate F-22 production, he was exercising his authority over peacetime acquisition policy, not wartime strategy. Another unique aspect of the F-22 case study is that the climax of the event was Secretary Gates' relief not only of the military leader of the service, but also the civilian service secretary—an event unique in the 60 year history of the DoD.

These distinctive aspects of the F-22 saga make it worthy as a case study for civil-military relations. The F-22 reveals the details of “steady state” relations between military and civilian leaders. As this steady state relationship has a significant impact on America's long-term national security strategy, the F-22 case study illuminates the strategic-level impacts of civil-military relations. Additionally, it suggests the study of civilian control is not as clear cut, neat, and tidy as many perceive, and that the dividing line between military and civilian spheres is more ambiguous than many assume. Finally, the eventual outcome of F-22 production speaks to strategic efficiency. Whether a proponent or detractor of the requirement for F-22 purchases, few on either side of the debate would argue that the cost of an F-22, the numbers acquired, or the capabilities delivered represent an optimal outcome. These factors make the F-22 an ideal case study

for establishing the relative validity of the leading current civil-military relations models and assessing the need for a new, strategy-optimizing, civil-military relations norm.

CHAPTER 2

THE F-22 CASE STUDY: PROGRAM INCEPTION THROUGH THE RUMSFELD ERA

On 4 June, 2008, Air Force Chief of Staff T. Michael Moseley awoke at Wright-Patterson Air Force Base, Ohio, expecting to spend the day addressing a gathering of Air Force senior leaders known as CORONA.¹ This thrice-annual gathering of three- and four-star general officers had much to contemplate, including a pending Air Force maintenance reorganization, the status of acquisition for a next generation bomber, and whether or not to go forward with a new design of the service dress uniform.² But Moseley's plans changed when Admiral Mike Mullen, Chairman of the Joint Chiefs of Staff, directed the Air Force Chief to return immediately to Washington.³ Officials had recently completed a review of the Air Force's mishandling of nuclear capabilities, and the results indicted the Air Force leadership for not working aggressively enough to fix shortfalls found during two separate incidents involving nuclear weapons and nuclear weapons components.⁴

Admiral Mullen summoned General Moseley to the Pentagon early the next morning. Their meeting did not last long. Admiral Mullen reportedly shared the results of the inquiry into Air Force nuclear practices with General Moseley and then, on behalf

¹ Erik Holmes, "Moseley, Wynne to be Asked to Resign," *airforcetimes.com*, 5 June 2008, http://www.airforcetimes.com/news/2008/06/airforce_canned_060508w/ (accessed 4 August 2009).

² These topics are taken from multiple sources. See Marc V. Schanz, "2018 Still in Play for New Bomber?" *airforce-magazine.com*, 4 June 2008, <http://www.airforce-magazine.com/DRArchive/Pages/default.aspx> (accessed 19 October 2009); Michael C. Sirak, "Air Force Reorganizes Maintenance Units," *airforce-magazine.com*, 20 May 2008, available from <http://www.airforce-magazine.com/DRArchive/Pages/2008/May%202008%20May%202008/AirForceReorganizesMaintenanceUnits.aspx> (accessed 19 October 2009); Rudy Purificato, "Heritage Coat Fit Testers," Brooks City-Base online new story, 8 February 2008, <http://www.brooks.af.mil/news/story.asp?id=123085599> (accessed 19 October 2009).

³ Holmes, "Moseley, Wynne to be Asked to Resign."

⁴ Tom Vanden Brook, "Nuclear Mishaps Lead to Air Force Resignations," *usatoday.com*, 6 June 2008, http://www.usatoday.com/news/military/2008-06-05-airforce-staff_N.htm (accessed 20 January 2010).

of the Secretary of Defense, requested the Air Force chief's resignation. Speculation began almost immediately, however, that the nuclear issue was merely a convenient cover for deeper disagreements between the Air Force and the Secretary of Defense. As the *Washington Post* reported,

The past year has seen friction between the Air Force and top Pentagon officials over matters including the service's role in the Iraq war and its preference for new, expensive F-22 fighter jets. The dispute over funding for the jets raised ire in the Bush administration because the Air Force lobbied for more jets than the White House was willing to officially request.⁵

Less than a year later, Secretary Gates sealed the F-22's fate. On April 6, 2009, he announced his plans to terminate F-22 production at 187 aircraft. When asked about the decision, Gates stated simply, "it was not a close call."⁶

Secretary Gates' decision represented the culmination of nearly a decade of strife between the Air Force and the defense secretary's office. Using the years from 2001 to the present to bound the F-22 case study is appropriate, for while the F-22 program came under considerable pressure throughout the 1990s, it received a reasonable level of support from civilian leaders until the arrival of Secretary of Defense Donald Rumsfeld. Still, a short history of the F-22 program prior to the Rumsfeld era provides valuable context for subsequent developments. Next, a look at the interactions between the Air Force and Secretaries Rumsfeld and Gates will establish the relative values of the dominant civil-military relations theories and help refine an understanding of their

⁵ Ann Scott Tyson and Josh White, "Top Two Air Force Officials Ousted," *washingtonpost.com*, 6 June 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/05/AR2008060501908.html> (accessed 19 October 2009).

⁶ OSD/PA, "DoD News Briefing with Secretary Gates from the Pentagon," 6 April 2009.

shortfalls. The nature of these shortfalls will then inform a discussion of potential new, normative models for civil-military interactions.

The F-22 Program from Inception to 2001

The Air Force's requirement for an advanced tactical fighter first began to emerge during the 1970s. At first, the Air Force defined the need for this follow-on fighter in terms of air-to-ground capability. In the late 1970s and early 1980s, however, a realization that air-to-air characteristics presented more challenging design constraints and increased concern over Soviet air superiority advances shifted the Air Force's emphasis toward development of air-to-air capabilities. Under these auspices, in 1981 the Advanced Tactical Fighter (ATF) program became a formal major acquisition program.⁷ In 1986, the Air Force awarded contracts to two contractor teams, led by Lockheed and Northrop, respectively, for the design and build of prototype ATF aircraft. The Air Force designated the Lockheed prototype the YF-22 and the Northrop prototype the YF-23.⁸

On April 23, 1991, after evaluating results from a flyoff between the two contractor team prototypes the year prior, the Air Force selected Lockheed Martin to design and produce the F-22.⁹ Although the Air Force originally had seen a need for approximately 750 F-22s, the 1991 program consisted of 648 total aircraft. In 1993, Secretary of Defense Les Aspin's Bottom-up Review (BUR), the first strategic-level look

⁷ David C. Aronstein, Michael J. Hirschberg, and Albert C. Piccirillo, *Advanced Tactical Fighter to F-22 Raptor: Origins of the 21st Century Air Dominance Fighter* (Reston, Virginia: American Institute of Aeronautics and Astronautics, 1998), 5.

⁸ Michael D. Williams, *Acquisition for the 21st Century: The F-22 Development Program* (Washington, DC: National Defense University Press, 1999), 56, 157-160.

⁹ *Ibid.*, 160.

at post-Cold War force structure, reduced the total number of planned aircraft to 442.¹⁰ Secretary of Defense William Cohen's 1997 Quadrennial Defense Review (QDR) further reduced the number of F-22s to 339 and "slow[ed] the ramp-up to full production of the aircraft."¹¹

Despite these restructurings of the F-22 program, the Raptor enjoyed a reasonable level of support from DoD civilian leadership throughout the 1990s. Although some questioned the need for the F-22 in the post-Cold War era, the cuts to the program after the BUR and 1997 QDR were part of a broader restructuring of the entire defense establishment. Importantly, although Secretary Aspin cut planned F-22 production by over 30 percent, neither he nor his replacement, Secretary of Defense William Perry, proposed subsequent reductions in F-22 numbers. Indeed, responding to critics who felt he was not reducing the defense budget enough, Aspin argued U.S. "security won't be found in merely cutting forces.... Our job is to buy the right forces for the right missions for the future."¹² For his part, Secretary Perry cut F-22 funding only once, by \$20 million in late 1994,¹³ and he later lauded the program as a "leader" in emerging concepts of defense acquisition.¹⁴ Finally, Secretary Cohen, despite having truncated F-22 numbers

¹⁰ Ronald O'Rourke, *Air Force F-22 Fighter Program: Background and Issues for Congress* (Washington, DC: Congressional Research Service, 16 July 2009), 7, http://assets.opencrs.com/rpts/RL31673_20090716.pdf (accessed 2 February 2010). See also, General Accounting Office, *GAO Report to Congressional Committees, Bottom-Up Review: Analysis of Key DOD Assumptions* (Washington, DC: General Accounting Office, January 1995), 3, <http://www.globalsecurity.org/military/library/report/gao/ns95056.pdf> (accessed 23 October 2009).

¹¹ Department of Defense, *Quadrennial Defense Review Report 1997* (Washington, DC: US Department of Defense, 1997), section VII, <http://www.fas.org/man/docs/qdr/sec7.html> (accessed 23 October 2009).

¹² Quoted in Melissa Healy, "Clinton's Lean Budget for Defense: Proposal to Cut Troops but Keep Major Weapons," *San Francisco Chronicle*, 27 March 1993, <http://www.proquest.com> (accessed 23 October 2009).

¹³ Luke Johnson, "Report: Air Force Officials Say F-22 Cuts Worse than Government Claims," *The Marietta Daily Journal*, 22 January 1995, <http://www.proquest.com/> (accessed 23 October 2009).

¹⁴ William J. Perry, introduction to Williams, *Acquisition for the 21st Century*, xi.

after the 1997 QDR, forcefully argued against further cuts in 1999. Writing to the Chairman of the House Appropriations Committee, Cohen stated that a proposed \$1.8 billion cut in F-22 funding “if enacted would for all practical purposes kill the F-22 program, the cornerstone of our nation’s global air power for the 21st century.”¹⁵

The environment of implicit—if fiscally constrained—support for the F-22 program throughout the 1990s changed dramatically with the arrival of Secretary of Defense Donald Rumsfeld in 2001. The manner by which Rumsfeld worked to impose his will on the Air Force and the F-22, and Air Force advocacy for the F-22 program in response to the Secretary’s hostility to the program, created a dysfunctional environment that relegated the development of long-term defense strategy to the back seat. Using agency theory to study the F-22 program during the Rumsfeld era helps explain the dynamics of the relationship between the Air Force and DoD leadership. While descriptively valid, however, agency theory unfortunately does not offer any insights or prescriptions for improving this relationship. The consequences of this failure will later manifest themselves in the suboptimal outcome of the nation’s only air dominance fighter program.

The F-22 and Civil-Military Relations during the Rumsfeld Era

Secretary Rumsfeld came to office intent on transforming the American military into a lighter, leaner, more lethal force. In an interview just three and a half weeks after taking office, the new secretary noted that many of the capabilities in the DoD “are good but they were designed for the Cold War. ...The Soviet Union is gone today, and it is a very different world. Technologies have advanced tremendously. ...[T]he President uses

¹⁵ Secretary of Defense Bill Cohen, letter to the House Appropriations Committee, 15 July 1999, <http://www.cdi.org/issues/tacair/cohenltr15Jul99.html> (accessed 19 October 2009).

the word transformation and I think properly so.”¹⁶ Rumsfeld quickly made it clear that all programs—including the F-22—were on the table. This position became more than evident when, in early February, the Air Force announced the completion of all testing needed for the Defense Acquisition Board (DAB) to make a Low Rate Initial Production (LRIP) decision. The next day, when asked whether or not the DAB would decide to release \$2.1 billion to the Air Force for initial production, a Pentagon spokesman replied that the DAB “has not yet been scheduled.... We still have quite a bit of homework to do. I can't predict for you when that will take place.”¹⁷ The “homework” the spokesman referenced primarily consisted of a top-to-bottom review of DoD programs.¹⁸

The Air Force took advantage of the time Rumsfeld required for his review. Sensing the danger inherent in Rumsfeld’s review process, the commander of the Air Force’s Air Combat Command (ACC), General John Jumper, used the first half of 2001 to build the case for the Raptor. Under his leadership, ACC developed and refined the concept of a Global Strike Task Force (GSTF). The biggest advantage of the GSTF, comprised of stealthy B-2 bombers and F-22 escort, was its ability to hold at risk a large number of enemy targets anywhere in the world. Jumper not only briefed members of Rumsfeld’s issue teams for his top-to-bottom review, but also lawmakers on Capitol Hill and Navy, Marine, and Army flag officers.¹⁹

¹⁶ Secretary of Defense Donald Rumsfeld, interview by Jim Lehrer, *News Hour*, PBS, 14 February 2001, http://www.pbs.org/newshour/bb/military/jan-june01/rumsfeld_2-14.html (accessed 27 October 2009).

¹⁷ OSD/PA, “DoD News Briefing - Rear Adm. Craig R. Quigley, DASD PA,” 6 February 2001, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=930> (accessed 28 October 2001).

¹⁸ Kathleen T. Rhem, “DoD Has Homework to do Before F-22 Decision,” American Forces Press Service, 7 February 2001, <http://www.defenselink.mil/news/newsarticle.aspx?id=45710> (accessed 27 October 2009).

¹⁹ “Marines, Air Force to Discuss Service Concepts of Operations Next Month,” *Defense Daily*, 8 June 2001, <http://www.proquest.com/> (accessed October 28, 2009). See also “Jumper: Air Force to

In the spring of 2001, General Jumper further articulated his vision for the GSTF in *Aerospace Power Journal*, the service's professional publication. It was here that the Air Force began to use the language of transformation when arguing in favor of continuing the F-22 program. Although the Air Force had articulated the concept of transformation as early as the late 1990s,²⁰ GSTF provided an explicit linkage between transformation and the Raptor. In his article, "Global Strike Task Force: A Transforming Concept, Forged by Experience," Jumper noted "GSTF provides the nation a new capability—one that maximizes current systems and technologies and leverages their potential through innovative CONOPS [concept of operations]."²¹

The Air Force continued to articulate the linkage between transformation and the F-22 over the next several years. General Jumper, General Ryan's successor as Air Force Chief of Staff, invoked transformation and the GSTF at his confirmation hearings in October 2001 and continued to do so throughout his tenure.²² Over time the language became prevalent throughout the F-22 community, and pilots often invoked transformation when interviewed about the aircraft.²³ While some of the discussion of transformation as an inherent F-22 quality was as a result of Air Force personnel adapting to the linguistic cues of their leadership, it was also the result of a concerted Air Force

Examine Numbers Needed for Global Strike Task Force," *Defense Daily*, 9 March 2001, <http://www.proquest.com/> (accessed October 28, 2009).

²⁰ See, for example, F. Whitten Peters and Michael D. Ryan, *Air Force Posture Statement 2000* (Washington, DC: Department of the Air Force, 2000), <http://armedservices.house.gov/comdocs/testimony/106thcongress/00-02-10ryan.htm> (accessed 28 October 2009). For a critical assessment of late 1990s Air Force transformation goals, see Frank Finelli, "Transforming Aerospace Power," *Airpower Journal* (Summer 1999): 4-14.

²¹ John Jumper, "Global Strike Task Force: A Transforming Concept, Forged by Experience," *Aerospace Power Journal* (Spring 2001): 32.

²² Rick Burnham, "Jumper New AF Chief of Staff," *Airman Magazine*, 1 October 2001, 13.

²³ For example, see David Thole and Alexis Grynkewich, interview by Greta van Susteren, *On the Record*, Fox News, 28 June 2004.

strategic communications effort. Indeed, the Air Force eventually issued specific public affairs guidance and talking points regarding the F-22 and its transformational characteristics.²⁴ In the end, Air Force emphasis on the F-22's transformational capabilities was so great it led one researcher to conclude that "proponents view the F/A-22 as the cornerstone of future U.S. air dominance and its combination of advanced technologies as a key catalyst and component of a true Air Force transformation."²⁵

In effect, Air Force leaders co-opted Secretary Rumsfeld's transformation language to bolster their arguments in favor of purchasing the F-22. Viewed through the lens of agency theory, this action fits Feaver's description of "moral hazard." Feaver describes moral hazard as a "work-to-rule" mentality where the agent makes an effort to look as if it is meeting the requirements of the principal although in reality it is shirking.²⁶ By using the language of transformation, the Air Force looked as though it was working toward the goals for force transformation set by Secretary Rumsfeld while actually pursuing its own internal agenda.

While some might criticize the Air Force for these actions, such criticism is only partly fair. Through the summer of 2001, Air Force leaders did not have any specific guidance from Secretary Rumsfeld on the F-22 program. The Secretary did not give any speeches indicating his intent on the F-22 program. The few times Rumsfeld did talk about Air Force fighter capability, his remarks seemed to imply a need to recapitalize the fleet. Speaking before the House Appropriation Committee in July 2001, Rumsfeld noted

²⁴ Air Combat Command Public Affairs, "F/A-22 Talking Points," Langley AFB, Virginia, July 2005. The author helped draft these talking points while assigned to F-22 operational test at Nellis AFB, Nevada.

²⁵ Christopher Bolkcom, *F/A-22 Raptor* (Washington, DC: Congressional Research Service, 6 January 2005), 7, <http://www.fas.org/man/crs/RL31673.pdf> (accessed 28 October 2009).

²⁶ Feaver, *Armed Servants*, 74.

“the F-15, F-18 and the F-16 aircraft flying today, were developed in the 1970s. ...

Because of the long procurement holiday of the 1990s, we have been left a poor hand.”²⁷

Furthermore, in August 2001 Rumsfeld made his first long-awaited decision on the F-22 program. Announcing the DoD decision to “proceed with the initial low-rate production of the F-22,” Pete Aldridge, the Undersecretary of Defense for Acquisition, Technology and Logistics, “describe[ed] the aircraft’s performance as ‘absolutely what we want.’”²⁸

Given these statements, Air Force officials had no reason *not* to make the case for the F-22, a capability they viewed as critical to the national defense. Unfortunately, senior-level DoD support for the F-22 eroded over the remaining years of Rumsfeld’s tenure.

This slide began in 2002, when the F-22 program faced a breach of the Nunn-McCurdy amendment to the 1982 Defense Authorization Act. Under Nunn-McCurdy, any program that experienced a cost growth of over 25% required DoD certification as essential to national security in order to avoid cancellation.²⁹ On May 2, 2002, Undersecretary Aldridge certified the F-22 under Nunn-McCurdy, but he also acknowledged DoD was considering a reduction in F-22 numbers below the Air Force recommendation.³⁰ By early 2003, Stephen Cambone, Undersecretary of Defense for

²⁷ OSD/PA, “Testimony [of Secretary of Defense Donald H. Rumsfeld] Prepared for Delivery on the 2002 Defense Department Amended Budget to the House Appropriations Committee,” 16 July 2001, <http://www.defenselink.mil/speeches/speech.aspx?speechid=405> (accessed 27 October 2009).

²⁸ Thom Shanker, “Acquisition Panel Approves \$60 Billion Fighter Program,” *New York Times*, 16 August 2001, <http://www.proquest.com> (accessed 29 October 2009).

²⁹ Nunn-McCurdy also requires certification that “there are no alternatives to such system which will provide equal or greater military capability at less cost; the new estimates of the total program acquisition unit cost or procurement unit cost are reasonable; and the management structure for such major defense system is adequate to manage and control total program acquisition unit cost or procurement unit cost.” U.S. Congress Conference Committee, *Nunn-McCurdy Amendment, Department of Defense Authorization Act (1982) Conference Report*, Report No. 97-311, 3 November 1981, <http://www.cdi.org/missile-defense/s815-conf-rpt.cfm> (accessed 29 October 2009).

³⁰ “Aldridge Approves At-Risk Programs under Nunn-McCurdy Amendment,” *Defense Daily*, 3 May 2002, <http://www.proquest.com/> (accessed 29 October 2009).

Intelligence, stated “top Pentagon officials intend to revisit the necessity of the F/A-22.”³¹

By 2004, DoD officials were openly discussing termination of F-22 production by the end of the decade, and reducing to total number of aircraft purchased under 200.³²

Despite this change in DoD attitudes toward the Raptor, Air Force leaders continued to use the language of transformation to justify the aircraft. In late 2002, General Jumper stated that he was going to “continue to make [the case for the F-22]. ... It is necessary to the concepts that we have put forward for the future of the Air Force.”³³ General Hal Hornburg, Jumper’s replacement at Air Combat Command, made a similar argument in mid-2003. He began by noting Rumsfeld had previously described transformation in terms of correct prioritization of requirements. Hornburg then used the same logic for the F-22: “If we are going to buy, let’s buy where it isn’t [low density].... That is one of the arguments that I and many others are trying to make about the F/A-22.”³⁴ Importantly, senior uniformed Air Force leaders were not the only ones to invoke transformational language. Civilian Air Force leaders shared this propensity, as evidenced by Secretary of the Air Force Dr. James Roche’s statement that the jet would “alter how we fight war and force opponents to alter how they think about war.”³⁵

From the Air Force perspective, by pursuing the F-22 it was pursuing appropriate transformational objectives. Indeed, GSTF *was* a transformational capability. The F-22,

³¹ Anne Marie Squeo and Greg Jaffe, “War’s Early Lessons May Curb Enthusiasm for Older Weapons,” *Wall Street Journal*, 11 April 2003, <http://www.proquest.com/> (accessed 29 October 2009).

³² Renae Merle, “Some Defense Programs Face Cuts; No Decisions Yet, but Raptor Fighter Program Could be Reduced,” *Washington Post*, 30 December 2004, <http://www.proquest.com/> (accessed 29 October 2009).

³³ Quoted in John A. Tirpak, “War and Transformation,” *Air Force Magazine*, October 2002, 77.

³⁴ Quoted in Adam J. Hebert, “It Means ‘We Didn’t Buy Enough,’” *Air Force Magazine*, July 2003, 63, 66. The Air Force uses the term “low density” to describe situations where demand for aircraft in combat exceeds the available inventory.

³⁵ Quoted in Adam J. Hebert, “Heavy Duty Air Force,” *Air Force Magazine*, April 2003, 28.

paired with the stealthy B-2 bomber, could hold targets at risk anywhere in the world and react in minimal time. The problem—and this is what defines the Air Force’s actions as the moral hazard subset of shirking—is that the Air Force vision for transformation did not comport with that of the Office of the Secretary of Defense (OSD). OSD saw transformation as leveraging information age technologies to make forces lighter, leaner, and potentially less expensive. Conversely, the Air Force viewed transformation as a technological leap forward that included, but was not exclusive to, the information domain. Advanced stealth and improved engine design, combined with the information technology required to field an advanced sensor suite, defined a transformational aircraft. The fact that these additional aspects of the Air Force transformation ideal increased the cost of premier weapons systems resulted in a severe disconnect from the OSD vision.

Besides this manifestation of agency theory’s moral hazard, Rumsfeld—like all principals in principal-agent constructs—also suffered from an information disadvantage with respect to the F-22. The Air Force claimed a monopoly on the expertise needed to set a military requirement for the numbers of F-22s to buy, and Rumsfeld was unsure whether or not to trust them.³⁶ Under agency theory, when the principal lacks confidence in his agent—particularly in the face of an acute information asymmetry—there exists an adverse selection problem. According to Feaver, adverse selection “crops up in the uncertainty civilian leaders have in evaluating proposals originating from military organizations.” As an example, Feaver notes that civilian leaders often find themselves

³⁶ The problem of lacking Rumsfeld’s trust was not unique to the Air Force. See Herspring, *The Pentagon and the Presidency*, 382-383.

asking if “this budget request [is] necessary to accomplish the mission, or is it padded to serve the military organization’s interests?”³⁷

This was clearly Rumsfeld’s quandary with respect to the F-22. In late 2002, General Jumper articulated an Air Force requirement for 339 Raptors despite Rumsfeld’s request that the Air Force reexamine (and reduce) its requirement in the 2004 budget.³⁸ By early 2003, despite having to restructure the F-22 program under a cost cap and restrict purchases to 276 aircraft, the Air Force actually had increased its requirement to 381 Raptors. The Air Force reported that despite a 2002 Defense Planning Study that “agreed with the Air Force that 381 F/A-22s was the right number...,[t]hat new figure has not yet received explicit endorsement from the Office of the Secretary of Defense.”³⁹

In evaluating the Air Force case for increased F-22 purchases, Secretary Rumsfeld depended on the service’s assessment of requirements and risk. Rumsfeld’s struggle with his lack of information and his inability to assess accurately the state of the F-22 program is apparent in the decisions he made or did not make with respect to the program.

According to Air Force Secretary Roche, in early 2003

Rumsfeld was impressed with the case the Air Force made for the F/A-22...but he did not formally adjust the production target. ‘Everyone agreed that there was no reason to have to make that final decision’ just now, Roche said. The Air Force case for buying more F/A-22s ‘was sufficiently compelling,’... to convince Rumsfeld to stick with earlier plans ‘and to give us a chance.’⁴⁰

Information asymmetry and the adverse selection problem had effectively paralyzed the defense secretary. This allowed the Air Force to continue shirking instead of working

³⁷ Feaver, *Armed Servants*, 74.

³⁸ Quoted in Suzann Chapman, “Jumper: 339 Is Minimum for F-22,” *Air Force Magazine*, October 2002, 12.

³⁹ John Tirpak, “The F/A-22 Gets Back on Track,” *Air Force Magazine*, March 2003, 22-23.

⁴⁰ *Ibid.*, 25.

toward Rumsfeld's transformation vision. Furthermore, the misalignment of the Air Force and Rumsfeld's concepts of transformation precluded any real communication or collaboration between the two as to what constituted an appropriate strategy for ensuring air dominance and, thus, how to manage the F-22 program.

In lieu of collaborating with the Air Force on coherent air dominance strategy, Rumsfeld attempted to use other tools to monitor (and control) the Air Force's management of the F-22 program. Under agency theory, oversight mechanisms can include contract incentives, screening and selection, fire alarms, institutional checks, police patrols, and revising the delegation decision.⁴¹ Table 1 briefly describes each of these mechanisms. Although Rumsfeld used some of these methods in his attempt to monitor and control the F-22 program, he did not use all of them. Of those methods Rumsfeld did attempt, the level of success he achieved varied greatly.

Under agency theory, a contract incentive is an "[o]ffer by civilians to use less intrusive monitoring in exchange for obedience."⁴² Rumsfeld made several attempts to use this tool to control Air Force management of the F-22 program. For example, the 2001 DAB decision allowing the F-22 to enter low rate production included provisions allowing the Air Force to "buy as many F/A-22s as it could with \$43 billion in production funds."⁴³ In the end, however, Rumsfeld's efforts in this area were ineffective. Rather than accept the leeway (and limitations) on F-22 production Rumsfeld provided under the buy-to-budget construct, the Air Force continued to push for additional funding to meet the goal of 381 aircraft.

⁴¹ Feaver, *Armed Servants*, 86.

⁴² Ibid.

⁴³ John Tirpak, "The F/A-22 Gets Back on Track," 25.

Mechanism	Agency Theory Definition
Contract incentives	Offer to use less intrusive monitoring in exchange for obedience
Screening and selection	Ensure only the right sort of agent enters into the contractual relationship.
Fire alarms	Use of outsiders to watch the agent and report on key outputs
Institutional checks	A separate agent, empowered by the principal, with a veto to block action of the other agent
Police patrols	Investigations or processes enforced by the principal to gather information on what the agent is doing
Revising the delegation decision	Revisiting the original decision to delegate authority to the military agent

Table 1: Agency Theory Oversight Mechanisms⁴⁴

After contract incentives, the next most intrusive control mechanism in agency theory is selection and screening. Under this mechanism, the principal executes control of the agent by ensuring “only the right sort of agent enters into the contractual relationship.”⁴⁵ Rumsfeld did not effectively use selection and screening to enforce his vision for the F-22 program.⁴⁶ Instead, throughout Rumsfeld’s tenure his recommended Air Force military and civilian leadership nominees were strong proponents of F-22 procurement. On the military side, Rumsfeld recommended the nominations of both General Jumper and his successor, General Moseley. Both of these individuals were on the record as staunch advocates for the Raptor.⁴⁷ The nominations of Jumper and Moseley highlight the difficulty principals face when using selection and screening in the

⁴⁴ Adapted from Feaver, *Armed Servants*, 75-86.

⁴⁵ Ibid., 78.

⁴⁶ Interestingly, Rumsfeld did effectively use selection and screening when replacing the Army Chief. by recalling a retired officer to active duty. Angela Yeoh, “President Nominates Retired General as CSA,” Army News Service, 16 June 2003, <http://www.globalsecurity.org/military/library/news/2003/06/mil-030616-usa01a.htm> (accessed 10 December 2009).

⁴⁷ For example, see Chapman, “Jumper: 339 Is Minimum for F-22,” and Butler, “USAF Chief Notes F-22s Are Needed, Defends Capabilities.”

civil-military context. As Feaver notes, “civilian principals have less discretion in using screening and selection to choose military agents.”⁴⁸ This is mainly because the principals must choose from a limited pool of senior military officers when making their selection, and most screening occurred at some time in the past.⁴⁹

Still, Feaver also notes “the president has virtually no limit” on his civilian appointments.⁵⁰ This power makes Rumsfeld’s recommendations for the position of Air Force secretary interesting. His choices of Dr. James Roche and, later, Michael Wynne both proved problematic. Both fought hard for the F-22 program. In 2003, as the battle over the F-22 reached a climax, Air Force Secretary Roche reportedly threatened to resign if Rumsfeld cut production.⁵¹ For his part, Secretary Wynne continued to advocate for 381 Raptor aircraft until his forced resignation in 2008, tirelessly developing strategies to keep the F-22 line open as long as possible.⁵² Why Rumsfeld choose Roche and Wynne is unclear, although some have cited the defense secretary’s “combative stance.”⁵³ More likely, however, was Rumsfeld’s preference and pattern of nominating leaders from industry to key military posts.⁵⁴ This preference apparently precluded Rumsfeld’s use of selection and screening by presenting him with a dilemma similar to

⁴⁸ Feaver, *Armed Servants*, 79.

⁴⁹ Ibid. Of interest is how Secretary Gates overcame this screening and selection problem in 2009 with the nomination of General Norton Schwartz to succeed Moseley, discussed below.

⁵⁰ Feaver, *Armed Servants*, 79.

⁵¹ Leslie Wayne, “Air Force Campaigns to Save Jet Fighter,” *New York Times*, 15 January 2005, <http://www.proquest.com/> (accessed 29 October 2009).

⁵² “Wynne: Air Force Would Like To Buy More F-22s,” *Defense Daily*, 29 October 2007, <http://www.proquest.com/> (accessed November 2, 2009). See also “F-22 Line Hinges On Commitment To Advance Procurement By October,” *Defense Daily*, 14 February 2008, <http://www.proquest.com/> (accessed November 2, 2009).

⁵³ Jonathan Karp and Andy Pasztor, “White House Turns to Wynne for Air Force Post Despite Past,” *Wall Street Journal*, 17 August 2005, <http://www.proquest.com/> (accessed November 2, 2009).

⁵⁴ George C Wilson, “Can Pentagon Inc. sell its IPO reforms?” *National Journal*, 19 May 2001, 1513, <http://www.proquest.com/> (accessed November 2, 2009).

that he faced in selecting the Air Force Chief of Staff. Namely, it ensured he had only a narrow pool of defense leaders from which to choose the Air Force secretary.

Rumsfeld was somewhat more successful in his use of fire alarms to control the Air Force. Fire alarms are inherently less intrusive than the monitoring methods previously discussed. Their main purpose is to “watch the agent and report on key outputs,” thereby alerting the principal when a particular military service is not compliant with policy.⁵⁵ During Rumsfeld’s tenure, fire alarms came from two main sources: the media and think tanks.⁵⁶ The media continuously reported on the Air Force vision for the F-22 program and the incongruence of this vision with DoD’s transformation goals.⁵⁷ Partisan and non-partisan think tanks published a dizzying number of papers in their attempt to keep the F-22 issue at the forefront of policy debates. Some argued in favor of robust F-22 procurement, but many more were critical of the Air Force’s requirement and management of the program.⁵⁸ Still, even though Rumsfeld had access to information from these fire alarms and knew the Air Force position on the F-22 as well as several of its failures, he did not act to enforce his vision on the Air Force.

⁵⁵ Feaver, *Armed Servants*, 80-81.

⁵⁶ *Ibid.*, 81-83, 86.

⁵⁷ For example, see David A. Fulghum and Robert Wall, “Is This War?; Budget Battles are Taking Shape in Differences between the Military and Senior Pentagon Civilians,” *Aviation Week & Space Technology*, 9 February 2004, 22-24.

⁵⁸ For an example of the pro-Raptor voice, see James Jay Carafano, “First Echoes of a Hollow Force? Air Force Choices Make Little Sense,” WebMemo #986, The Heritage Foundation, 3 February 2006, <http://www.heritage.org/Research/NationalSecurity/wm986.cfm> (accessed 2 November 2009). The negative perspective on the F-22 is much more prevalent. See Project on Government Oversight, “Preying On The Taxpayer: The F-22A Raptor,” Project on Government Oversight, 25 July 2006, <http://www.pogo.org/pogo-files/reports/national-security/f-22a-raptor/ns-f-22a-raptor-2006.html> (accessed 2 November 2009); James Stevenson, “F-22 Fighter Performance: How does the F-22A compare a quarter century later?” Straus Military Reform Project, Center for Defense Information, 2006, <http://www.cdi.org/pdfs/stevenson%20f-22%20brief.pdf> (accessed 2 November 2009); Anthony H. Cordesman Paul S. Frederiksen, “America’s Uncertain Approach to Strategy and Force Planning,” Center for Strategic and International Studies, 5 July 2006, http://csis.org/files/media/csis/pubs/060705_strategy_force.pdf (accessed 2 November 2009).

Instead of acting on fire alarms, Rumsfeld preferred to rely on institutional checks to control the F-22 program. As defined by Feaver, an institutional check is “a separate agent, empowered by the principal, with a veto to block action of the other agent.”⁵⁹ Rumsfeld’s primary tool in this regard was DoD’s operational test and evaluation enterprise. As an Acquisition Category 1 (ACAT 1) program, all F-22 test and evaluation was under OSD oversight.⁶⁰ From 2001 to 2005, OSD action officers directly and intrusively intervened in the F-22 test program. The intent of the oversight was to ensure F-22 compliance with service requirements put forth in the Operational Requirements Document (ORD).⁶¹ As a result of this oversight, OSD found issues during F-22 development including low observable material maintenance, avionics stability, and late aircraft deliveries.⁶² After the F-22 test program revealed these difficulties in mid-2001, “Rumsfeld allowed Roche and Jumper to take steps to ‘put some discipline back in the system.’”⁶³ The defense secretary allowed the Air Force to restructure F-22 test again in 2002. As General Jumper noted that July, “[t]he people responsible have come back and told us there are other ways to go about this that may be more efficient than the way

⁵⁹ Feaver, *Armed Servants*, 81.

⁶⁰ The ACAT system sets the decision authority and oversight for defense acquisition programs based on program cost. ACAT 1 programs are those defense programs which exceed a total production cost of \$2.19 billion. See Moshe Schwartz, *Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process* (Washington, DC: Congressional Research Service, 10 July 2009, http://assets.opencrs.com/rpts/RL34026_20090710.pdf (accessed 2 February 2010)).

⁶¹ The OSD action officer for this oversight was Mr. Curt Cook. During the author’s time conducting F-22 test and evaluation, Mr. Cook assiduously fulfilled his duties, forcing several changes to test plans and conducting independent reporting on Air Force test results.

⁶² Philip E. Coyle, Director, Operational Test and Evaluation, Memorandum for Under Secretary of Defense (Acquisition, Technology, and Logistics), “F-22 Test and Evaluation Status,” 20 December 2000, http://www.d-n-i.net/fcs/pdf/ref_3_f-22_coyle_memo.pdf (accessed 2 November 2009).

⁶³ John Tirpak, “The F/A-22 Gets Back on Track,” 27.

we've gone about it now...the secretary [of the Air Force] and I are in the process of taking a personal look at this.”⁶⁴

Problems continued to plague the F-22 through the beginning of Initial Operational Test and Evaluation (IOT&E) in April 2004.⁶⁵ Just six weeks before the start of IOT&E, the Air Force leadership was far from confident in the aircraft. When asked if the F-22 was ready, Secretary Roche, citing low flight test rates and maintenance problems, conceded, “I think it’s iffy.”⁶⁶ Roche’s concerns proved well-founded. IOT&E found the Raptor effective in simulated combat, but only “potentially suitable” with respect to its maintainability and reliability.⁶⁷ In other words, the F-22 proved itself combat capable, if only the Air Force could keep it in the air. Given these results, Rumsfeld could have killed the program. Although this might have created a backlash from F-22 advocates in Congress, the test results would have provided political cover and justification for Rumsfeld’s action. In short, IOT&E provided Rumsfeld the ideal opportunity to use the test and evaluation process as an institutional check, but he failed to do so.

Furthermore, Rumsfeld continued to allow the Air Force to pursue its buy-to-budget strategy. The Defense Planning Guidance (DPG) even allowed the Air Force to look at increasing the F-22 buy. General Jumper confirmed the lack of significant

⁶⁴ Quoted in Frank Wolfe, “Jumper: Air Force Studying New Flight Test Approach to F-22,” *Defense Daily*, 8 July 2002, http://findarticles.com/p/articles/mi_6712/is_4_215/ai_n28926962/ (accessed 3 November 2009).

⁶⁵ Christopher Bolkcom, *Tactical Aircraft Modernization: Issues for Congress* (Washington, DC: Congressional Research Service, 7 October 2005), 2-3, <http://www.dtic.mil/cgi-in/GetTRDoc?AD=ADA443898&Location=U2&doc=GetTRDoc.pdf> (accessed 2 November 2009).

⁶⁶ Marc Selinger, “Roche: F/A-22’s Readiness for Key Testing Phase Is ‘Iffy,’” *aviationweek.com*, 18 March 2004, http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=aerospacedaily&id=news/rapr03184.xml (accessed 2 November 2009).

⁶⁷ “F/A-22 IOT&E Results,” *codeonemagazine.com*, 1st Qtr 2005, http://www.codeonemagazine.com/events/jan_05/jan05_events02.html (accessed 2 November 2009).

pressure on the Air Force. According to the Air Force chief, Rumsfeld “has asked us to take another look at this, and we're proud to do that. We think we have a truly transformational system here.... The Secretary has opened the door for what we think is an open and honest debate on the size of the fleet.... This isn't about killing the F-22. It's about right sizing the F-22 fleet....”⁶⁸ Clearly the Air Force did not feel it had received definitive guidance on the F-22 program from the defense secretary.

The 2006 budget finally gave Rumsfeld a victory over the Air Force and the F-22. He pushed the Air Force to reduce F-22 numbers to 180, and this time the defense secretary had the upper hand. Acquisition scandals surrounding purchase of a new aerial refueling tanker forced Secretary Roche to resign and tarnished the service's uniformed leadership. The Air Force fought back aggressively, however. General Jumper went so far as to complete a checkout program in the single-seat F-22 in order to gain credibility during the debate.⁶⁹ Although Jumper recognized Rumsfeld had the final word, the Air Force fell back on Huntington's idea of a separate military sphere. Jumper clearly viewed aircraft acquisition and how to equip Air Force forces as a military prerogative.⁷⁰ Air Force leaders went so far as to suggest cutting back on the purchase of the F-35 Joint Strike Fighter, a multi-service, multi-national program with Rumsfeld's support, in order

⁶⁸ Quoted in Wolfe, “Jumper: Air Force Studying New Flight Test Approach to F-22.”

⁶⁹ Leslie Wayne, “Air Force Campaigns to Save Jet Fighter.”

⁷⁰ “Air Force Leaders Vow to Fight for Endangered Raptor,” *Defense Daily*, 22 February 2005, <http://www.proquest.com/> (accessed 29 October 2009). For a discussion of Rumsfeld's interference in the military sphere, see Herspring, *The Pentagon and the Presidency*, 406.

to buy more F-22s.⁷¹ Still, Rumsfeld was able to capitalize on the Air Force's relative weakness. The final 2006 budget cut the planned total number of F-22s to just 179.⁷²

Proponents of the F-22 program often cite severe reductions in F-22 numbers, including the 2006 cuts, as indicative of a broken acquisition system that drives up aircraft cost. There is some truth to this claim. As aircraft numbers decrease, research and development costs are spread over fewer and fewer aircraft. Additionally, reductions in aircraft numbers are often accompanied by delays in production and reductions in production line output. High yearly production numbers mean the contractor will deliver the full number of aircraft to the government over fewer years. Low yearly production requires the contractor to keep the production line open for additional years, thereby driving up aircraft cost. In the case of the F-22, initial estimates put yearly production at 72 aircraft per year.⁷³ In actuality, production never came close to those numbers due to annual funding constraints. The highest number of Raptors produced in a year was 24, in fiscal year 2009.⁷⁴ The inevitable increase in per unit cost that results from production delays and reduced output—decisions usually made in order to save money on an annual basis—ironically leads to increased pressure on the program for further cuts. The result is a “death spiral” as rising costs lead to further delays and output reductions, which then lead to even higher costs.⁷⁵

⁷¹ Peter Spiegel, “Rumsfeld Clashes with Air Force Top Brass on Plan to Cut Fighter Order,” *Financial Times*, 4 January 2005, <http://www.proquest.com/> (accessed 29 October 2009). See also Wayne, “Air Force Campaigns to Save Jet Fighter.”

⁷² O'Rourke, *Air Force F-22 Fighter Program*, 7.

⁷³ Barry Watts, “Backgrounder: The F-22 Program in Retrospect,” Center for Strategic and Budgetary Assessments, August 2009), 3-4, http://www.csbaonline.org/4Publications/PubLibrary/B.20090908.F-22_Program_in_Re/B.20090908.F-22_Program_in_Re.pdf (accessed 4 December 2009).

⁷⁴ O'Rourke, *Air Force F-22 Fighter Program*, 8.

⁷⁵ The process is aptly described for the F-35 in Robert S. Dudley, “The F-35 Dice Roll,” *Air Force Magazine*, December 2009, 2. Chapter 4 will discuss F-22 costs in more detail.

While all of the above is true, blaming the acquisition process for these problems confuses the symptom with its cause. Had Rumsfeld and the Air Force been in lockstep on the F-22 program, they could have made tradeoffs to preserve the program's production timeline and increased the rate at which aircraft rolled off the production line. Instead, a dysfunctional relationship existed as neither the Air Force nor Rumsfeld had an effective construct for civil-military relations. The Air Force remained wedded to the Huntingtonian notion that the F-22 program lay in the military sphere and should be free of civilian influence. Rumsfeld, on the other hand, employed (poorly, it turns out), the tools of agency theory in an attempt to enforce his will. This latter style reflected the defense secretary's "willingness—even eagerness—to interfere at all levels" of the military services.⁷⁶ In other words, the existence of two incompatible civil-military relations constructs—not a broken acquisition system—precluded the collaboration necessary to obtain strategic coherence on the F-22 program.

The 2006 QDR gave Rumsfeld one final opportunity to solidify his victory in the 2006 budget battle. In agency theory terms, the QDR is partly an institutional check as it provides a venue for the various services to submit their vision of the future force to OSD for adjudication. But the QDR is also a form of police patrol, as it gives the civilians in the OSD secretariat the opportunity to "closely monitor and direct the actions of their military counterparts."⁷⁷ Rumsfeld ultimately squandered this opportunity, however. The QDR's decision on the F-22 was to "[r]estructure the F-22A program and extend production through Fiscal Year 2010 with a multi-year acquisition contract, to ensure the

⁷⁶ Herspring, *The Pentagon and the Presidency*, 406.

⁷⁷ Feaver, *Armed Servants*, 84.

Department does not have a gap in 5th generation stealth capabilities.”⁷⁸ The multi-year procurement contract that followed reduced the total number of F-22s produced each year from 24 to 20, and, in accordance with the QDR, extended production through 2010.⁷⁹ Thus, instead of providing a venue for terminating the program or directing an irrevocable end to F-22 production, the QDR actually ensured F-22 production would continue beyond Secretary Rumsfeld’s tenure. In doing so, it actually increased the number of F-22s programmed to 183 aircraft and gave the Air Force hope it could increase F-22 production under the next secretary of defense.⁸⁰

The Rumsfeld Era in Context

Ultimately, Rumsfeld’s use of the various methods to monitor the F-22 program was ineffective. Part of the reason for this was that he never revised his delegation decision for the F-22 program. According to Feaver, “[c]ivilian principals have the option of redrawing the boundary, crossing over into the military zone to make or implement a decision on a particular issue or set of issues.”⁸¹ Yet Rumsfeld allowed the Air Force significant leeway in executing the F-22 program. This leeway is remarkable given the difficulties and costs of the program. Additionally, Rumsfeld elected not to employ any punishment mechanisms against the Air Force. He had the option of using both punishment and screening and selection throughout his time in office, but he backed down when Secretary Roche threatened resignation in 2003, and he never proactively

⁷⁸ Department of Defense, *Quadrennial Defense Review Report* (Washington, DC: Department of Defense, 6 February 2006), 46, <http://www.defense.gov/qdr/report/Report20060203.pdf> (accessed 2 February 2010).

⁷⁹ O’Rourke, *Air Force F-22 Fighter Program*, 8.

⁸⁰ Fred Kaplan, “Rumsfeld Surrenders: The QDR Dashes his Dreams of Military Transformation,” *Slate.com*, 3 February 2006, <http://www.slate.com/toobar.aspx?action=print&id=2135343> (accessed 27 October 2009). See also “Budget wars,” *Flight International*, 14-20 February 2006, <http://www.flightglobal.com/articles/2006/02/14/204666/budget-wars.html> (accessed 2 February 2010).

⁸¹ Feaver, *Armed Servants*, 85.

threatened or pursued firing or forcing resignations of any other Air Force leaders.⁸²

Ultimately, the defense secretary's failure to monitor and punish the Air Force allowed the service to shirk implementing his vision of a drastically reduced F-22 program.

Importantly, the Air Force behaved in the manner it did not because of an inherent desire to shirk. Instead, Air Force actions reflected a desire to fulfill the normative model of civil-military relations. As discussed above, this model consists of two separate spheres of competency: one military and one civilian. From the Air Force perspective, its Title 10 responsibility to equip air forces along with the associated procurement authorities meant primary responsibility for the F-22 program lay in the military sphere.⁸³ Still, history taught Air Force leaders about defense secretary primacy in acquisitions,⁸⁴ and they clearly knew the Title 10 authorities of the defense secretary in this area. General Jumper even stated that, with respect to F-22 numbers, "it's the secretary of defense that has to make the choice. We're going to lay the argument out and present the facts. But in the end, the choice is not the choice of the United States Air Force."⁸⁵ Yet Rumsfeld never provided clear and unequivocal guidance to the Air Force on the F-22. The closest he appears to have come to doing so was on the eve of the 2006 QDR. In an interview with Senator Saxby Chambliss of Georgia, Rumsfeld acknowledged his concerns about the numbers the Air Force planned to procure. Moments later in the same

⁸² Leslie Wayne, "Air Force Campaigns to Save Jet Fighter."

⁸³ Title 10 USC, §8013, §8016, and §9532.

⁸⁴ Rumsfeld's cancellation of the Crusader program was the most relevant historical lesson from which the Air Force could have learned. See Vernon Loeb, "Rumsfeld Untracks 'Crusader': Weapon's End Faces Hill GOP Challenge," *washingtonpost.com*, 9 May 2002, <http://www.washingtonpost.com/ac2/wp-dyn?pagename=article&node=&contentId=A53762-2002May8¬Found=true> (accessed 2 February 2010).

⁸⁵ "Air Force Leaders Vow to Fight For Endangered Raptor," *Defense Daily*, 22 February 2005. Title 10 USC, Chapter 137 discusses procurement authorities.

interview—matching his pattern since 2001—Rumsfeld equivocated, calling the F-22 “a fine airplane.”⁸⁶

In the end, Rumsfeld was largely unsuccessful in his attempt to influence the F-22 program. He was unable (or unwilling) to cancel the program, and his 2006 QDR ensured the program would extend past his time in office. From an agency theory perspective, this inability to control a particular aspect of the Air Force programming is surprising. In *Armed Servants*, Feaver highlights Rumsfeld’s shortfall as a potential limitation of agency theory as a descriptive model of civil-military relations, explaining this aberration as a “backlash” against the abrasive manner by which the defense secretary attempted to exert his authority.⁸⁷

In this sense, Feaver views the Rumsfeld case as the exception which proves the rule. What Feaver neglects to consider in his own defense, however, is Rumsfeld’s unwillingness (or inability) to adopt highly intrusive monitoring techniques or to use the punishment tools available to him. In the end, Rumsfeld’s failures in this regard are as much to blame for the continuation of the conflicting visions for the F-22 program as Air Force shirking. As a result, agency theory emerges from the Rumsfeld years stronger than its own author initially argued. Unfortunately, while the Rumsfeld era case study of the F-22 reveals the descriptive accuracy of agency theory, it also demonstrates the theory’s fundamental shortcoming. Because agency theory fails to describe how civil-military interactions *should* occur, civilian policymakers and military officers looking for prescriptive guidance will find it wanting. Furthermore, when a civilian practitioner of

⁸⁶ “Rumsfeld praises C-130J, hedges on F/A-22,” Associated Press, 11 August 2005, <http://www.accessnorthga.com/detail.php?n=141412> (accessed 3 November 2009).

⁸⁷ Feaver, *Armed Servants*, 290.

agency theory comes into conflict with a service steeped in the tradition of objective control, the resultant dysfunction guarantees strategic incoherence. Thus, during the Rumsfeld years, the F-22 program was anything but coherent.

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CHAPTER 3

THE F-22 CASE STUDY: THE GATES ERA

While the clear applicability of agency theory during Rumsfeld's tenure is clear in hindsight, at the time the Air Force interpreted the lesson from the Secretary's years in office as a validation of objective control and confirmation that there existed a separate sphere of military competence. The Air Force adhered to this model throughout the Rumsfeld era, and it viewed itself as the party primarily responsible for F-22 acquisition decisions. While this created tension during the Rumsfeld era, the defense secretary's failure to move toward intrusive monitoring or punishment reinforced the Air Force perception that procurement was, at its core and despite OSD oversight, a service prerogative. This perception—or misperception—would ultimately result in continued strife during the Gates era.

Secretary Rumsfeld used fire alarms, institutional checks, and police patrols in his unsuccessful efforts to uncover and counter Air Force shirking. By early 2008, however the dynamics of the F-22 situation had changed radically, altering the dynamics of the agency theory relationship between the Air Force and DoD's civilian leadership. Indeed, although newly-appointed Secretary of Defense Robert Gates would employ the tools of agency theory to control Air Force actions, he did not need these tools to uncover evidence of shirking: the Air Force's refusal to work toward the defense secretary's goal was out in the open. Accordingly, Secretary Gates quickly moved beyond the less intrusive monitoring techniques Rumsfeld had tried, ruthlessly employing agency theory tools to assert control over the next several months. His first step was to punish the Air Force for its intransigence, but follow-on actions proved equally important. Gates used

screening and selection to obviate the moral hazard and adverse selection problems that had plagued his predecessor. Additionally, he stripped the Air Force of its prerogative to decide the future of the F-22 program and provided positive incentives to the Air Force in return for support to his broader agenda. His actions would again validate the descriptive value of agency theory, while at the same time highlighting its lack of a prescriptive norm for civil-military relations.¹ This shortfall doomed the F-22 program to continued suffering from a lack of coherent strategy.

The Early Gates Era

After coming into office in December 2006, Secretary Gates inherited a host of issues from Rumsfeld. Although Gates and Rumsfeld had distinct and differing visions for the DoD, Gates shared Rumsfeld's overall assessment of the F-22 program. During Gates' confirmation hearing, the ongoing war in Iraq dominated discussions,² and the new defense secretary remained focused on the war effort for most of his first year in office. Indeed, during this first year in office, Gates only addressed the F-22 once in a DoD press conference, and then it was only in response to a question.³ Over time, the

¹ As articulated in the introduction, part of what defines a "good theory" in political science (and, thus, what gives a theory value) is whether or not it accurately describes (or predicts) events when properly tested. This is a separate and distinct concept from a norm for behavior, which Merriam-Webster defines as "a principle of right action binding upon members of a group and serving to guide, control, or regulate proper behavior." For a complete discussion of what constitutes a "good theory," see Van Evera, *Guide to Methods for Students of Political Science*, 17-20. The definition of norm is available from the Merriam-Webster online dictionary, <http://www.merriam-webster.com/dictionary/norm> (accessed 21 January 2010).

² "Transcript: Confirmation Hearing of Robert Gates to Be Secretary of Defense," *Washington Post*, 5 December 2006, http://media.washingtonpost.com/wp-srv/politics/documents/rgates_hearing_120506.html (accessed 4 November 2009).

³ The questioner asked Gates: "The F-22 multi-year buy? I understand you certified that?" The secretary's response reveals something about his focus and thinking: "Not that I'm aware of." OSD/PA, "DoD Media Roundtable With Secretary Gates and Gen. Pace in the Pentagon Briefing Room, Arlington, Va.," 29 June 2007, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4004> (accessed 4 November 2009).

ongoing wars in Iraq and Afghanistan—and the F-22’s lack of relevance to them—would shape Gates’ opinion of the aircraft.

When asked about the F-22 during his confirmation hearing in December 2006, Gates’ stated he was “prepared to consult with the Congress and with the president.... I think changes need to be made, changes in allocations [for weapons systems].” He also added that “this business of planning for the future is every bit as important as taking care of today and tomorrow. And I will make it a priority.”⁴ A year later, Gates’ vision of the future had solidified. “The reality,” Gates told the Senate Armed Services Committee in February 2008,

is we are fighting two wars, in Iraq and Afghanistan, and the F-22 has not performed a single mission in either theater. So it is principally for use against a near peer in a conflict, and I think we all know who that is. And looking at what I regard as the level of risk of conflict with one of those near peers over the next four or five years until the Joint Strike Fighter comes along, I think that something along the lines of 183 is a reasonable buy.⁵

The only allowance Gates made was that he also planned to leave the production line open “to give the next administration an option.”⁶ Gates also announced that DoD would ask for four additional F-22s in the 2009 supplemental, bringing the program total to 187.⁷

While the secretary’s opinion on the F-22 was now clear, he had left a small opening for the Air Force to continue its efforts to extend Raptor production. The Air Force wasted no time in exploiting this opening. Less than a week after Gates’ testimony, Air Force Secretary Wynne stated with respect to the F-22 program, “I think

⁴ “Transcript: Confirmation Hearing of Robert Gates to Be Secretary of Defense,” *Washington Post*.

⁵ Quoted in Jen DiMascio, “Gates: F-22 Production Increase Could Hurt More Affordable JSF,” *Defense Daily*, 7 February 2008, <http://www.proquest.com> (accessed 29 October 2009).

⁶ *Ibid.*

⁷ John M. Doyle, “Gates to Keep F-22 Line Open,” *Aerospace Daily & Defense Report*, 7 February 2008, available from http://www.aviationweek.com/aw/jsp_includes/articlePrint.jsp?storyID=news/F22020708/ (accessed 4 November 2009).

the Secretary of Defense said it well, a difference of opinion remains. I still think he's a great guy.”⁸ Wynne also added that “Congress in the end has always had the final say, and he looks forward to what it will say.”⁹ At the same time, Air Force General Bruce Carlson, the commander of Air Materiel Command, told reporters “[w]e think that [183] is the wrong number....We're committed to funding 380.” He then added that the Air Force was “building a program right now to do that” despite the defense secretary’s comments and the president’s budget request.¹⁰



Figure 3: Secretary Gates in an F-22A at Langley AFB¹¹

Gates was furious, and he called the Air Force Secretary directly to tell him so. After the call, Wynne and Moseley released a terse statement: “The Air Force wholeheartedly supports the president’s budget request for the F-22 program.”¹² Despite this reversal, however, the Air Force still saw a requirement for 381 Raptors. In early

⁸ Quoted in “F-22 Line Hinges On Commitment to Advance Procurement by October,” *Defense Daily*, 14 February 2008, <http://www.proquest.com/> (accessed November 2, 2009).

⁹ Ibid.

¹⁰ Bettina H. Chavanne, “General: We Will Find A Way To Buy 380 F-22s,” *aviationweek.com*, 13 February 2008, <http://www.aviationweek.com/aw/generic/story.jsp?id= news/MORE02138.xml&headline=USAF%20General:%20We%20Will%20Find%20A%20Way%20To%20Buy%20380%20F-22s&channel=defense> (accessed 4 November 2009).

¹¹ U.S. Air Force photo, <http://www.acc.af.mil/shared/media/photodb/photos/070222-F-9497Y-001.jpg> (accessed 21 January 2010).

¹² Quoted in William Matthews, “Pumping up the Numbers,” *Armed Forces Journal* (April 2008), <http://www.armedforcesjournal.com/2008/04/3392707/> (accessed 23 September 2009).

March 2008, in committee hearings on the 2009 budget, senators repeatedly asked Wynne and Moseley about the F-22. Both men expressed their support for the president's budget, but the tension was clear when Senator Levin when asked Moseley about DoD's plan for 183 aircraft: "[s]ir, I would tell you, this is another example of—we completely support the President's budget, and the Secretary of Defense's budget submission."¹³ Exasperated senators eventually asked for the Air Force Secretary and Chief to give their personal opinion.

Senator Chambliss: Okay. The projected buy of F-22s today is 183. I understand that's a budget number, and it's what's been proposed by the Air Force. From a personal standpoint, General Moseley, do you think that number's enough?

General Moseley: No, sir.

Senator Chambliss: Secretary Wynne?

Mr. Wynne: Sir, not being the warfighter, my reliance is on the outside agencies, and I think there's a study out there that basically says about 277 is a—gets you to the minimum medium risk. So, that's, kind of, what I would rely on. Otherwise, we're driving [sic] by affordability.¹⁴

The exchange with Senator Chambliss is telling. Despite Gates' personal appeal—even demand—to the Air Force leadership asking for their support of his budget, the secretary still faced the same moral hazard and adverse selection problems as did Rumsfeld. Simply put, Air Force leadership held views they would not (or perhaps could not) change, and these views proved irreconcilable with the defense secretary's policy.

¹³ Senate Committee on Armed Services, *Hearing to Receive Testimony of the Department of the Air Force in Review of the Defense Authorization Request for Fiscal Year 2009 and the Fiscal Years Defense Program*, 5 March 2008, 12, <http://armed-services.senate.gov/Transcripts/2008/03%20March/A%20Full%20Committee/08-17%20-%203-5-08.pdf> (accessed 4 November 2009).

¹⁴ Senate Committee on Armed Services, *Hearing to Receive Testimony of the Department of the Air Force in Review of the Defense Authorization Request for Fiscal Year 2009*, 39. Of note, Senator Chambliss (R-GA) was a staunch supporter of the F-22 program. Perhaps not incidentally, the main F-22 assembly plant was in Marietta, Georgia, just north of Atlanta.

The Decapitation of the Air Force

Throughout the spring of 2008, Secretary Gates methodically and publically built a case indicting the Air Force and its leaders for failures across a range of issues. In a well-publicized speech at Air War College in late April, Gates criticized the Air Force for failing to incorporate irregular warfare into major training exercises and doctrinal manuals, and he disparaged the service for its slow acceptance of unmanned aircraft. The defense secretary bluntly challenged his largely Air Force audience, imploring them to adapt “to a constantly changing security environment characterized by persistent conflict.”¹⁵ In a speech the following month at the Brookings Institution, Gates continued his emphasis on irregular conflict, stating, “I believe that any major weapons program, in order to remain viable, will have to show some utility and relevance to the kind of irregular campaigns that...are most likely to engage American's military in the coming decades.”¹⁶

Then, in early June, investigators delivered to Gates a report on the investigation into the shipment to Taiwan of four nuclear arming and fusing devices. This report provided the catalyst for the forced resignation of Secretary Wynne and General Moseley, a dual-firing unprecedented in Defense Department history.¹⁷ While the shipment was primarily a failure within the Defense Logistics Agency, the lead investigator, Navy Admiral Kirkland Donald, uncovered systemic problems with respect to Air Force stewardship of the intercontinental ballistic missile (ICBM) force. In an

¹⁵ OSD/PA, “Remarks to Air War College,” 21 April 2008, <http://www.defenselink.mil/speeches/speech.aspx?speechid=1231> (accessed 25 August 2009).

¹⁶ OSD/PA, “Remarks to the Heritage Foundation,” 13 May 2009, <http://www.defenselink.mil/speeches/speech.aspx?speechid=1240> (accessed 25 August 2009).

¹⁷ “Moseley and Wynne Forced Out,” *airforcetimes.com*, 9 June 2009, http://www.airforcetimes.com/news/2008/06/airforce_moseleywynne_060508w/ (accessed 11 November 2009).

afternoon press conference on June 5, Gates cited this failure, in the context of an earlier incident involving the unauthorized and unintentional carriage of nuclear weapons between Minot and Barksdale Air Force bases, as his sole reason for demanding the resignations.¹⁸ Within moments of the announcement, a member of the press asked Gates whether other issues, such as the Air Force's focus on future conventional conflicts instead of the current fight, contributed to the decision. Gates replied, "I've made the decision that I've made based entirely on Admiral Donald's report."¹⁹

Over the next several days the defense secretary continued to insist the nuclear incident was the only reason for firing the Air Force leadership. Speaking to a group of Airmen at Langley Air Force Base, which hosts two squadrons of operational F-22s, Gates stated the nuclear incident

was not the 'last straw' in my dealings with the Air Force leadership. We have had disagreements, to be sure. There is little use in pretending otherwise. But I have also had disagreements with the other service chiefs. Friction between the Department of Defense's civilian leadership and military services is inevitable under our system....²⁰

In a closed door question and answer period immediately after the speech, Gates used a question on the F-22 to reiterate the resignations were not due to disagreements over Raptor production. "I said that was not true," he stated, adding he supported keeping the production line open so "the next administration could decide" how many aircraft to purchase.²¹

¹⁸ OSD/PA, "DoD New Briefing with Secretary Gates from the Pentagon," 5 June 2009, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4236> (accessed 26 August 2009).

¹⁹ Ibid.

²⁰ OSD/PA, "Remarks to Langley Airmen," 9 June 2008, <http://www.defenselink.mil/speeches/speech.aspx?speechid=1256> (accessed 25 August 2009).

²¹ OSD/PA, "Media Availability with Secretary of Defense Robert Gates En Route to Colorado Springs, Colorado," 10 June 2008, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4240> (accessed 26 August 2009).

Clearly repeat breaches of nuclear security were serious matters that called for some type of action against the Air Force, but several sources challenge the defense secretary's claim that disagreements over the F-22 had no impact on his decision to relieve the Air Force leadership. Tellingly, the Defense Logistics Agency (DLA), not the Air Force, mistakenly shipped nuclear arming and fusing devices to Taiwan. Correctly assessing the seriousness of the issue, Gates "demanded sweeping reviews to discover how [the shipment to Taiwan] happened and whether it indicates a broader problem in the security of the military's nuclear weapons and related materials."²² Admiral Donald's subsequent report did uncover significant problems at DLA, but Gates focused on cultural failures in the Air Force.²³ The subtle disconnect between the problem (DLA shipment of unauthorized nuclear materials to Taiwan) and the solution (the forced resignation of Moseley and Wynne) suggests additional factors might have played a role in Gates' decision.

Evidence indicates the F-22 issue likely was one such factor. When Admiral Mullen met with General Moseley on the morning of June 5 to request the latter's resignation on behalf of Secretary Gates, the two men barely talked about the nuclear issue. Instead, their discussion centered the Air Force's focus on preparing for the next war and neglect of the current conflicts in Iraq and Afghanistan. A defense official familiar with the discussion that morning noted the F-22 was definitely a factor.²⁴

²² Lolita C. Baldor, "Gates Orders Inventory of US Nukes," *usatoday.com*, 27 March 2008, http://www.usatoday.com/news/topstories/2008-03-27-2703562648_x.htm (accessed 11 November 2009).

²³ Gates did acknowledge that, in addition to the Air Force issues, the report found fault with DLA and made "a couple of disciplinary recommendations ... to the secretary of the Army." OSD/PA, "DoD New Briefing with Secretary Gates from the Pentagon," 5 June 2008.

²⁴ Statement of defense official to the author, 27 July 2009. This official discussed the meeting with Admiral Mullen directly with General Moseley. All anonymous statements and interviews are at the request of the interviewee.

Secretary Wynne shared this perspective. When asked on his last day in office why he was fired, Wynne cited several issues, including the Air Force's nuclear stewardship.

Tellingly, however, Wynne began his reply with a simple, declarative statement:

“Secretary [Gates] and I had some long-standing disputes about the funding for F-22.”²⁵

Several other defense officials also acknowledged “earlier problems” had played a role in the forced resignations, “including the service's role in the Iraq war and its preference for new, expensive F-22 fighter jets.”²⁶

All told, the nuclear issue alone is not a sufficient explanation for Secretary Gates' actions.²⁷ As one senior DoD official recalled, the Air Force's nuclear slip-ups “weren't the only reasons these guys were fired. Gates was looking for some excuse, and this was a pretty good one.”²⁸ Secretary Gates clearly was frustrated with the Air Force's open hostility to his position on the F-22, particularly in the context of two ongoing irregular conflicts where the aircraft had limited, if any, applicability. The nuclear issue was an important factor in another way, however. Not only was it a significant issue between Gates and the Air Force in its own right: it also provided unassailable political cover under which Gates could force the Air Force leadership to resign. Had Gates attempted to force the resignation of Moseley and Wynne over the F-22, the political backlash

²⁵ “Wynne Speaks Out: Tell-all Interview Covers Iraq Withdrawal, Nuclear Report, Procurement and More,” *airforcetimes.com*, 16 July 2008, http://www.airforcetimes.com/news/2008/07/airforce_wynne_interview_071408/ (accessed 11 November 2009).

²⁶ Ann Scott Tyson and Josh White, “Top Two Air Force Officials Ousted: Failures in Oversight Of Nuclear Arms Cited,” *washingtonpost.com*, 6 June 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/05/AR2008060501908.html?sid=ST2008060502708> (accessed 11 November 2009).

²⁷ Other sources share this view. See, for example, John Barry, “Deplaned: Behind Defense Secretary Gates's Air Force Shake-up,” *newsweek.com*, web exclusive, 6 June 2008, <http://www.newsweek.com/id/140276/> (accessed 11 November 2009).

²⁸ Fred Kaplan, “Attack of the Drones: Now that Congress has Killed the F-22, the Air Force is Facing Another Shock to the System: Planes without Pilots,” *newsweek.com*, 19 September 2009, <http://www.newsweek.com/id/215825/page/2> (accessed 24 November 2009).

would have been severe. Yet, with the nuclear issue put forth as his paramount consideration, few could question the defense secretary's actions.²⁹

In agency theory terms, when deciding to force the resignations of Wynne and Moseley, Gates was using a punishment mechanism. Peter Feaver discusses several categories of punishment, including “restrictive monitoring” in the form of audits, current or future “material disincentives,” use of the military justice system, and extralegal actions.³⁰ This final category contains everything from “private oral rebukes all the way to the infamous Stalinist purges.”³¹ The decapitation of the Air Force appears to span two of these categories. First, forcing the resignations of Wynne and Moseley imposed a material disincentive in terms of both lost pay and lost prestige. From this perspective, the firings likely signaled a warning to other senior Air Force leaders lest they suffer the same fate. Second and perhaps more importantly, Gates' actions were, in effect, a bloodless purge of the Air Force. From this perspective, the firings signaled a need for rapid change to the entire Air Force as an institution. The Secretary of Defense's subsequent actions would reinforce this message.

Air Force Civil-Military Relations after Moseley and Wynne

Commenting shortly after the resignations of Moseley and Wynne, defense analyst Loren Thompson noted “[i]t was clear the relationship between the Office of the Secretary of Defense and the Air Force was deteriorating.... This [is] the final chapter in

²⁹ Some in Congress did question the defense secretary's actions and attempt to tie it back to the F-22, but their queries never gained traction. See, for example, Representative Clifford Stearns (R-FL), “Air Force General Moseley and Secretary Wynne Should be Honored, not Fired,” *Cong. Rec.*, section 51, <http://www.govtrack.us/congress/record.xpd?id=110-h20080716-51> (accessed 11 November 2009).

³⁰ Feaver, *Armed Servants*, 94.

³¹ *Ibid.*, 93.

a long list of grievances between OSD and the Air Force.”³² Far from a final chapter, however, the firings opened an entirely new book on civil-military relations between the Air Force and OSD. The Air Force significantly modified its behavior in response to the punishment of its two highest leaders, and Secretary Gates’ robustly employed the tools of agency theory to shape and control the new Air Force leadership. Specifically, Gates employed the mechanisms of screening and selection and revising the delegation decision. Additionally, he would reinforce these actions through the use of a positive agency theory incentive, organizational slack.³³

Following Gates' punishment of the Air Force, the defense secretary used screening and selection to inform his decision on replacements for the Air Force chief of staff and secretary. Under agency theory, the purpose of this mechanism is “to ensure that only the right sort of agent enters into the contractual relationship.”³⁴ Of course, Gates faced the same adverse selection problem as had Rumsfeld when selecting Wynne and Moseley to lead the Air Force. On the civilian side, where the pool of potential candidates was theoretically unlimited, Gates' faced only political constraints. Here he settled on Michael Donley, his Director of Administration and Management who had a significant background working defense and national security issues.³⁵ On the military side, Gates faced a more acute problem: a limited pool of officers from which to choose. Gates overcame this limitation, however, by picking an officer on the cusp of retirement

³² “Moseley and Wynne Forced Out,” *airforcetimes.com*.

³³ Feaver defines organizational slack as providing the military with autonomy in return for compliance. This concept is discussed in more detail below. Feaver, *Armed Servants*, 78.

³⁴ Ibid.

³⁵ Department of Defense, “Michael B. Donley: Secretary of the Air Force,” <http://www.defenselink.mil/bios/biographydetail.aspx?biographyid=43> (accessed 23 November 2009).

and who did not share the fighter pedigree that had dominated Air Force corporate leadership since 1982: General Norton Schwartz.³⁶

General Schwartz could not have been more different from the officer he replaced. Whereas General Moseley had cut his teeth in the F-15C, an air superiority aircraft, and graduated from the elite Fighter Weapons course, General Schwartz came from flying airlifters and special operations aircraft. General Moseley's last command prior becoming chief had been Air Combat Command, which owned all of the traditional combat power—fighters and bombers—in the Air Force. General Schwartz, by contrast, had served as the commander of U.S. Transportation Command, which moved materiel around the world in support of combat operations.³⁷ As Schwartz described the job, “[i]t's hard to jazz it up, but it's like blocking and tackling, [and] ... teams don't score many touchdowns without a few block and tackles.”³⁸

The selection of General Schwartz surprised many pundits. Most defense analysts presumed Gates would pick another fighter pilot. Long before the forced resignations, insiders saw General John Corley, the fighter pilot in charge of Air Combat Command, as the heir-apparent to Moseley. Many suspected he might still get the service's top job.³⁹ Had this happened, the tensions between the Air Force and OSD with respect to the F-22

³⁶ Fred Kaplan, “Attack of the Drones”; Josh White, “2 Picked for Top Spots in the Air Force,” *washingtonpost.com*, 10 June 2008, <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/09/AR2008060900747.html> (accessed 23 November 2009). See also, William H. McMichael, “Mullen: New Air Force Picks Based on Talent,” *airforcetimes.com*, 11 June 2008, http://www.airforcetimes.com/news/2008/06/military_mullen_airforce_061008w/ (accessed 24 November 2009).

³⁷ Department of the Air Force, “T. Michael Moseley,” <http://www.af.mil/information/bios/bio.asp?bioID=6545> (accessed 24 November 2009). Department of Defense, “General Norton A. Schwartz: Chief of Staff U.S. Air Force,” <http://www.defenselink.mil/bios/biographydetail.aspx?biographyid=92> (accessed 24 November 2009).

³⁸ Quoted OSD/PA, “Welcoming Ceremony for Air Force Chief of Staff Norton Schwartz,” <http://www.defenselink.mil/speeches/speech.aspx?speechid=1267> (accessed 25 August 2009).

³⁹ Anonymous Air Force officer, interview with the author, 26 November 2009. This officer served in the Chief of Staff's action group during Moseley's tenure.

likely would have continued. In agency theory terms, both outside observers and Air Force insiders assumed Gates would be unable to overcome the problem of adverse selection and the resultant moral hazard.

Gates' screening and subsequent selection of a different kind of Air Force general did two things that proved these observers and insiders wrong. First, Schwartz' nomination sent a strong signal that the entire organization was being held accountable. In other words, Moseley was not going to bear the consequences for Air Force actions during his tenure alone. Other senior fighter pilot generals, including Corley, would also suffer.⁴⁰ Besides naming General Schwartz as Air Force chief, Gates recommended General William Fraser, a bomber pilot, for the position of vice chief. When asked about the significance of “not having a fighter pilot in one of the top two slots” in the Air Force, Admiral Mullen admitted it was “certainly an important message.”⁴¹ In this sense, the nomination of Schwartz raised the stakes for the entire Air Force, or at least among its leadership elite. Second, the Schwartz nomination empowered the non-fighter communities in the Air Force. Many of the communities had long perceived themselves as being marginalized at the expense of the “fighter mafia.”⁴² For these groups, the Schwartz nomination represented an opportunity to publicize and advocate for the long-ignored Air Force capabilities they represented. In many cases these communities—such as Air Force special operations, airlift, and unmanned systems—represented the very

⁴⁰ General Corley announced his retirement in May 2009, although he would not retire until September 2009. Thomas J. Doscher, “General Fraser takes command of ACC,” 10 September 2009, <http://www.langley.af.mil/news/story.asp?id=123167202> (accessed 24 November 2009).

⁴¹ McMichael, “Mullen: New Air Force Picks Based on Talent.”

⁴² Numerous articles and opinion pieces share this view. For example, see Max Boot, “The Heir up There,” *nytimes.com*, 16 June 2008, <http://www.nytimes.com/2008/06/16/opinion/16boot.html> (accessed 24 November 2009). See also Gordon Lubold, “Air Force Leadership Works to Regain Trust: The New Chief of Staff Must Overcome a Recent Pattern of Service Mismanagement,” *csmonitor.com*, 14 August 2008, <http://www.csmonitor.com/2008/0814/p02s01-usmi.html> (accessed 24 November 2009).

areas where Secretary Gates had been prodding the Air Force to invest in since taking office.⁴³

When Gates recommended President George W. Bush nominate Schwartz as the 19th Air Force Chief of Staff, he likely thought it would be his last major action to influence final disposition of the F-22 program. Instead, President-elect Obama announced in late November that Gates would continue in office during the next administration.⁴⁴ This gave Gates the opportunity to further his vision for the Air Force and provide decisive and final guidance on the F-22 program. The tool Gates would use to this end was the fiscal year 2010 defense budget recommendation.

During the process leading up to the 2010 budget announcement, General Schwartz and others signaled their willingness to compromise on the F-22. The Air Force chief indicated he did not think the service required 381 Raptors anymore, but that an additional 60 airplanes would provide a medium risk force.⁴⁵ Admiral Mullen also appeared open to discussion regarding acquisition of 60 additional F-22 aircraft.⁴⁶ Thus, it surprised many when, on April 6, 2009, Secretary Gates announced his recommendation: “We will end production of the F-22 fighter at 187.”⁴⁷ Even more surprising, when asked about the decision and whether the Air Force agreed with 187

⁴³ OSD/PA, “Remarks to Air War College.”

⁴⁴ Mike Allen, “Gates Agrees to Stay on Under Obama,” *politico.com*, 25 November 2008, <http://www.politico.com/news/stories/1108/15986.html> (accessed 24 November 2009).

⁴⁵ Jim Wolf, “U.S. Air Force Says Needs More F-22 Fighters,” *reuters.com*, 17 February 2009, <http://www.reuters.com/article/marketsNews/idUSN1719852220090217> (accessed 24 November 2009). See also Michael Hoffman, “Schwartz Takes up Fight for More Raptors,” *airforcetimes.com*, 22 February 2009, http://www.airforcetimes.com/news/2009/02/airforce_F22_schwartz_022009/ (accessed 24 November 2009).

⁴⁶ OSD/PA, “DoD New Briefing with Admiral Mullen from the Pentagon,” 10 December 2008, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4330> (accessed 24 November 2009).

⁴⁷ OSD/PA, “Defense Budget Recommendation Statement,” 6 April 2009, <http://www.defenselink.mil/speeches/speech.aspx?speechid=1341> (accessed 25 August 2009).

jets, Gates replied, “[t]hat was their [the Air Force’s] advice as well.”⁴⁸ Speculation continued, however, that the defense secretary was muzzling the Air Force until the *Washington Post* published an op-ed signed by both General Schwartz and Secretary of the Air Force Donley on April 13th, titled “Moving Beyond the F-22.” In the article Schwartz and Donley laid to rest any question about where they, and thus the Air Force, stood. “We are often asked,” they wrote, “‘How many F-22s does the Air Force need?’” They then noted the evolution of the F-22 requirement from 740 aircraft, to 381, and to their own earlier assessment “that 243 aircraft would be a moderate risk force.” However, they added, “purchasing an additional 60 aircraft ... would create an unfunded \$13 billion bill just as defense budgets are becoming more constrained. This decision has increasingly become a zero-sum game. ... Buying more F-22s means doing less of something else.” Their conclusion was unequivocal: “we do not recommend that F-22s be included in the fiscal 2010 defense budget.”⁴⁹

The Gates Era in Context

The Air Force's reversal in position on the F-22 was stunning. While it is tempting to attribute this change to the differences between General Schwartz, Secretary Donley, and their predecessors, the empirical evidence suggests other imperatives were in play. General Schwartz certainly came into the job as chief of staff from a non-traditional background, but he had advocated for additional Raptors throughout his short tenure.⁵⁰ Indeed, when questioned directly on the issue, Schwartz continued to articulate the need for more Raptors even after Secretary Gates' production termination decision.

⁴⁸ OSD/PA, “DoD News Briefing With Secretary Gates From The Pentagon,” 6 April 2009.

⁴⁹ Donley and Schwartz, “Moving Beyond the F-22.”

⁵⁰ OSD/PA, “DoD News Briefing with Admiral Mullen from the Pentagon,” 10 December 2008, <http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4330> (accessed 21 January 2010).

In a statement to Congress on 16 April 2008, Schwartz told the Senate Armed Services Committee, “243 [Raptors] is the military requirement.”⁵¹ Thus, Secretary Gates' contention that the Air Force had lowered its requirement to 187 F-22 aircraft seems disingenuous. A revealing exchange between a reporter and Secretary Gates occurred on April 7, 2009. The reporter asked: “As recently as a few weeks ago, Air Force leadership was still publicly saying 260, 265. When did that change for them?” The official DoD transcript documents Gates' reply and demeanor: “Well, you'll have to ask them. (Chuckles.)”⁵²

Airmen at Elmendorf Air Force Base took Gates' advice and asked the chief what had changed. The answer was, not much. General Schwartz asked (and answered) rhetorically, “[w]ould we like to have additional F-22s? Of course. We have said 243 is the ideal fleet size given the things we see in front of us.”⁵³ So, if the Air Force requirement had not changed, what had? Agency theory offers three insights that together form a persuasive and parsimonious explanation. First, as discussed above, the forced resignation of Wynne and Moseley was clearly a punishment mechanism. This had a predictable impact on the Air Force's subsequent behavior. According to Feaver, in cases where military agents prefer to shirk (in other words, in cases where they disagree with the civilian leadership and instead would rather pursue their own agenda), the civilian principal can compel them to work by making “the punishment...great enough to

⁵¹ U.S. Senate, *Statement of Senator Orrin G. Hatch before the United States Senate On the F-22A Raptor*, 16 July 2009, 4, http://www.afa.org/edop/2009/OGH_Statement.PDF (accessed 24 November 2009).

⁵² OSD/PA “Media Roundtable with Secretary of Defense Robert Gates and General James Cartwright, Vice Chairman, Joint Chiefs of Staff and Selected Reporters,” 7 April 2009, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4399> (accessed 24 November 2009).

⁵³ Christopher Gross, “Chief of Staff Engages with Elmendorf Airmen,” Air Force Print News, 8 July 2009, http://www.pacaf.af.mil/news/story_print.asp?id=123157910 (accessed 24 November 2009).

reduce the net gain of shirking below that of working.”⁵⁴ This calculus appears to have been operative during the 2010 budget. Air Force leaders likely concluded that, despite their personal and professional opinion as to the need for additional F-22s (and thus a desire to shirk), the cost to both them personally and the Air Force institutionally was not worth it.

The second agency theory insight into Air Force behavior surrounds Secretary Gates' use of the defense budget to impose his will on the Air Force. This action reinforced the service's cost-benefit (or, more precisely, its work or shirk with punishment) analysis. Agency theory could categorize his action in one of two ways. The first of these is as an additional punishment. Under this interpretation, Gates' cutting of the F-22 from the Air Force budget provided a material disincentive to the service and signaled his continued displeasure.⁵⁵ While this might certainly have been part of Gates' calculus, more compelling is the second agency theory categorization: revising the delegation decision. Feaver describes this highly intrusive monitoring technique as “[i]ntervening ... to make a decision that was hitherto in the scope of delegated authority.”⁵⁶ This interpretation is compelling because prior to Gates' direction in the 2010 budget the Air Force saw F-22 acquisition as a service responsibility. Under Title 10, the Air Force is responsible for organizing, training and equipping forces. This construct also fit the Air Force's operative civil-military construct of objective control. Gates changed the dynamic, pulling authority for continuing or ending major weapons programs back under his direct purview. Importantly, this revised delegation decision did

⁵⁴ Feaver, *Armed Servants*, 105-107. Quote is from 107.

⁵⁵ *Ibid.*, 91, 94.

⁵⁶ *Ibid.*, 86.

not just apply to the F-22. In July 2008, Gates revoked Air Force authority to manage the KC-X tanker program after a series of mismanaged bids.⁵⁷

Finally, Gates provided a carrot to the Air Force. Implicit in the defense secretary's intrusive monitoring and management of the Air Force was a potential for the return of some measure of autonomy to the service once it got back on track. In agency theory terms, the military “prizes autonomy,” a form of “slack without a monetary denomination.”⁵⁸ Civilian leaders, then, “have a powerful incentive with which to influence military behavior: offer to use less intrusive means to monitor military agents.”⁵⁹ Thus, rather than continue to invoke the ire of the DoD civilian leadership and risk continued intrusive monitoring, Air Force leadership likely concluded it was in the service's long-term interest to come into line on the F-22. In fact, subsequent events suggest this was a reasonable conclusion. In September 2009, just over one year after stripping the service of the authority to run the KC-X tanker acquisition, Gates returned authority for the program to the Air Force. In a speech to the Air Force Association's annual conference Gates noted, “I have confidence that the KC-X selection authority is in good hands with the service’s leadership team of Secretary Donley and General Schwartz.”⁶⁰

The interplay of monitoring and punishment mechanisms throughout the F-22 case study clearly validates agency theory as a descriptive model for civil-military

⁵⁷ Colin Clark, “Tanker Decision out of Air Force Hands,” *military.com*, 9 July 2008, <http://www.military.com/news/article/pentagon-to-reopen-tanker-bidding.html?ESRC=airforce-a.nl> (accessed 24 November 2009).

⁵⁸ Feaver, *Armed Servants*, 78.

⁵⁹ *Ibid.*

⁶⁰ OSD/PA, “Secretary Gates Remarks at the Air Force Association's Annual Conference,” 16 September 2009, <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4478> (accessed 24 November 2009).

relations. During the Rumsfeld era, there were no real consequences imposed on the Air Force for shirking. Thus, the Air Force had no tangible incentive to work to achieve the defense secretary's vision. Once Secretary Gates took the helm of the defense department, however, the dynamic changed. The defense secretary punished the Air Force for shirking, then used screening and selection to mitigate against moral hazard, or the risk of having Air Force leaders who did not share his views. Gates then reinforced his actions by revising the delegation decision with respect to major acquisition programs, including the F-22 and KC-X, and implicitly offering to return some measure of autonomy back to the Air Force once it realigned its behavior in accordance with his vision. Interestingly, the F-22 case study suggests agency theory may apply not only to military officers, but also to civilian agents such as the service secretaries. Clearly, the same dynamics that affected the behavior of Generals Moseley and Schwartz also pertained to Secretaries Wynne and Donley.

While the validation of agency theory is an important insight from the F-22 case study, it is not the most important. More significant is the case study's revelation that, at least during the Moseley-Wynne reign, the Air Force perspective on civil-military relations clashed with that of the defense secretary. This disconnect between the Air Force and defense secretary's perception of civil-military relations created a dysfunctional strategic environment. Clashing visions conspired with unclear lanes of authority and prevented serious discussions between the defense secretaries and the Air Force. Unfortunately, by the time the lack of congruence became clear—with the resignations of Moseley and Wynne—it was too late. The time for discussion was past, and the imperative of establishing Defense Department supremacy outweighed all other

considerations. Clearly, however, defense procurement—the weapons a nation buys—should correspond to and support the broader national defense strategy. Thus, the inability of the two sides to collaborate on the F-22 program suggests the existence of systemic problems in the current norms and concepts of civil-military relations that merit additional attention.

CHAPTER 4

IMPLICATIONS

The F-22 case study reveals that the tension between the Air Force and Defense Department throughout the F-22 saga resulted from divergent conceptions of civil-military relations between senior service officials and DoD's civilian leadership. This is significant in and of itself. It suggests a need to better train military officers and better prepare civilian leaders to prevent such dissonance in the interest of furthering professional courtesy and comity through shared expectations. Military officers receive limited formal training on civil-military relations either before or after commissioning, and most of the curricula centers on Huntington's ideal of objective control.¹ On the senior civilian side, there is, of course, no prerequisite to possess a robust understanding of the nuances of civil-military relations theory or practice. Civil appointees bring with them only the knowledge they have gained either through study or experience, and there is no training program to educate the uninitiated.²

Given these shortfalls and challenges, a solution to fix the lack of professional courtesy and comity might lay in the recognition that agency theory accurately describes civil-military relations. Having accepted this, the military could institute a robust training

¹ For a discussion of civil-military training at the pre-commissioning level, see Don M. Snider, Robert F. Priest, and Felisa Lewis, "The Civilian-Military Gap and Professional Military Education at the Precommissioning Level," *Armed Forces and Society* 27, no. 2 (Winter 2001): 249-272. For civil-military relations curricula in post-commissioning professional military education, see Judith Hicks Stiehm, "Civil-Military Relations in War College Curricula," *Armed Forces and Society* 27, no. 2 (Winter 2001): 273-294, and Kathleen Norris, "Civil-Military Relations: Educating U.S. Air Force Officers at the Graduate Level," paper presented at the 48th annual International Studies Association Convention, Chicago, Illinois, March 2007), http://www.allacademic.com/meta/p_mla_apa_research_citation/1/7/9/5/0/pages179502/p179502-1.php (accessed 3 February 2010).

² The broader problem of senior civilian appointees lacking knowledge regarding military affairs in general is discussed in Gregory D. Foster, "Civil-Military Relations: The Postmodern Democratic Challenge," *World Affairs* 167, no. 3 (Winter 2005): 99.

program to condition officers to expect (and accept) civilian interference in military affairs. In this way, the military would acquiesce to Feaver's dictate that "civilians have the right to be wrong"³ and uniformed leaders would no longer object to civilians exercising this prerogative.

If a lack of professional courtesy and comity were the only consequences of the civil-military disconnect, the solution outlined above might make sense. If, however, this disconnect results in suboptimal strategic outcomes, training military officers to acquiesce *in toto* to civilian leadership may not be the best solution. Furthermore, if the reason for suboptimal outcomes is not simply different civil-military paradigms leading to confrontation and mistrust, but a failure to exploit the relative competencies of civilian and military leaders, training cannot be the solution. Unfortunately, because agency theory hampers collaboration between civilian and military elites, it drives suboptimal results. Put bluntly, despite the benefits of agency theory in articulating how civilians can control military behavior, Feaver's emphasis on the idea that "civilians have the right to be wrong" is detrimental to strategy development. Of course, civilians *do* have the final say, but they also have a moral responsibility to try to get strategy right. Subordinating this responsibility to a simple and unsophisticated catch phrase advocating civilian primacy is morally irresponsible and strategically dangerous.

Feaver himself acknowledges that agency theory might not always produce an optimal strategic end-state.⁴ A brief review of post-World War II military history confirms the lack of collaboration between civilian and military leaders produced at best uneven strategic results. Andrew Bacevich has shown how differing worldviews and a

³ Feaver, *Armed Servants*, 298.

⁴ *Ibid.*, 65.

lack of collaboration between President Eisenhower and Army Chief of Staff General Matthew Ridgeway in the development of the New Look strategy led to a decline in military professionalism with disastrous consequences heading into Vietnam.⁵ Similarly, Feaver himself cites Vietnam as an example where civilian policy did not align with military means.⁶ Several other authors have criticized the political nature of General Colin Powell, Chairman of the Joint Chiefs of Staff from 1989-1993 and an officer whose formative experience was Vietnam. Powell dared to articulate publicly the conditions under which he would find it acceptable to risk American blood and treasure in combat in a variety of venues, including *Foreign Affairs*.⁷ Some have accused Powell of using such public and “traditionally civilian political forums” to create a situation whereby civilian leaders needed his concurrence if they wanted to order the military into action. Others have suggested Powell used various bureaucratic strategies to constrain the options available to the President in a contingency.⁸ Richard Kohn has argued Powell’s actions “restrained first the Bush, and then the Clinton, administration from action.”⁹ Such criticisms imply a lack of collaboration between the civilian masters and their military servants in the development and execution of national strategy.

More contemporary examples suggest this pattern has continued. In a memorandum to Secretary Rumsfeld in 2003, outgoing Army Chief of Staff General Eric Shinseki complained about a lack of collaboration on the Army’s Crusader program:

⁵ A. J. Bacevich, “The Paradox of Professionalism, 303-333.

⁶ Feaver, *Armed Servants*, 177.

⁷ Colin L. Powell, “U.S. Forces: Challenges Ahead,” *Foreign Affairs* (Winter 1992/93): 32-45.

⁸ Lyle J. Goldstein, “General John Shalikashvili and the Civil-Military Relations of Peacekeeping,” *Armed Force and Society* 26, iss. 3 (Spring 2000): 387-411, www.proquest.com (accessed 30 July 2009). See also, Eliot Cohen, “Playing Powell Politics: The General’s Zest for Power,” review of *My American Journey* by Colin Powell, *Foreign Affairs* 74 (November/December 1995): 108.

⁹ Richard H. Kohn, “Out of Control,” *The National Interest* 35 (Spring 1994): 12.

“Without any consultation or forewarning, you declared your intent to terminate the program”¹⁰ Similarly, several authors have documented the mutual frustration of Secretary Rumsfeld and General Tommy Franks, commander of U.S. Central Command for both the 2001 invasion of Afghanistan and the 2003 invasion of Iraq. Few could argue for the efficacy of the strategic outcome in either theater, at least in the short term.¹¹ Again, General Shinseki confirmed the Army’s frustration. Writing about a reported disagreement with Rumsfeld on the number of troops required for the Iraqi invasion, Shinseki complained, “neither you nor Deputy Secretary Wolfowitz ever discussed this issue with me despite all the commentary in the press.”¹² While each situation outlined above is unique, the common thread between them is a systemic failure to synthesize civilian and military considerations. Taking the analysis of the F-22 program one step further reveals that it, too, matches this pattern.

The Strategic Outcome of the F-22 Saga

The lack of collaboration between military and civilian leaders on the F-22 program is evident from the case study. The opposing paradigms of civil-military relations held by Air Force and OSD led to an environment of mistrust that precluded collaboration between the two organizations on the program. Furthermore, evidence suggests this lack of collaboration resulted in a program that was indeed suboptimal.

¹⁰ Eric Shinseki to the Secretary of Defense, “End of Tour Memorandum,” 10 June 2003, 2, <http://media.washingtonpost.com/wp-srv/opinions/documents/shinseki.pdf> (accessed 25 January 2010).

¹¹ Both the Rumsfeld and Franks views of the debate confirm this point. See Tommy Franks, *American Soldier* (New York: HarperCollins, 2004); Andrew Bacevich, “A Modern Major General,” review of *American Soldier* by Tommy Franks with Malcolm McConnell, *New Left Review* 29 (September/October 2004): 123-134, <http://newleftreview.org/A2529> (accessed 25 November 2009); Michael C. Desch, “Bush and the Generals,” *Foreign Affairs* 86, iss. 3 (May/June 2007), <http://www.proquest.com/> (accessed 3 August 2009).

¹² Eric Shinseki to the Secretary of Defense, “End of Tour Memorandum,” 2.

Neither F-22 proponents nor its detractors contend that the final F-22 cost, numbers purchased, or fielded capabilities were optimum.

The cost of an F-22, and the relationship of this cost to available resources, is a key factor in determining how well the program served U.S. strategic interests.

Unfortunately, although the question of how much an F-22 costs is simple, the answer is not. The government measures the cost of acquisition programs in a variety of ways.

Whether an organization does or does not support the F-22 often determines the methodology it uses.¹³ Three basic costing methods are useful. First, Program

Acquisition Unit Cost (PAUC) is the program's total acquisition cost divided by the total number of aircraft delivered. Total acquisition cost includes research and development costs; procurement costs of primary equipment (e.g., the airplane), support equipment (e.g., unique tools), and initial spare parts; and military construction costs (e.g., new hangars, changes to runway configurations). Also, the total number of aircraft used to calculate PAUC includes both production and pre-production aircraft, such as test vehicles.¹⁴ Because PAUC includes all of these various factors, it generally provides a high end cost quote.¹⁵ In December 2007, the DoD reported an F-22 PAUC of \$350.8 million.¹⁶

The second cost-calculating method is Average Procurement Unit Cost (APUC).

The DoD calculates APUC by dividing total procurement cost by the number of

¹³ Travis Sharp, "Lies, Damn Lies, and Defense Budgets," Center for Arms Control and Non-proliferation, 2 April 2009, <http://nukesofhazardblog.com/story/2009/4/2/133125/0101> (accessed 4 December 2009).

¹⁴ O'Rourke, *Air Force F-22 Fighter Program*, 8-9.

¹⁵ Other methods for determining cost will yield a number in excess of PAUC. One example is total ownership cost. This adds in costs for operations and maintenance over the lifecycle of a program. Department of the Navy, "Total Ownership Cost," 11 February 2008, <http://www.navair.navy.mil/toc/home/faqs/faqs.html> (accessed 4 December 2009).

¹⁶ This number is in 2007 dollars. O'Rourke, *Air Force F-22 Fighter Program*, 9.

production aircraft.¹⁷ As such, it does not account for research and development cost or military construction, nor does it include any pre-production test vehicles. Importantly, however, APUC does include the procurement of support equipment and initial spare parts.¹⁸ According to Air Force documents submitted to Congress in support of the fiscal year 2010 budget, F-22 APUC is approximately \$194.7 million.¹⁹

The final cost-calculating method for the F-22 is unit flyaway cost (UFC). UFC includes only the cost of procuring the primary mission equipment, and does not include any support equipment or initial spare parts.²⁰ A common conceptualization of UFC is that it equates to the “sticker price,” or that it is what a contractor would charge the government to purchase another aircraft. In the Air Force’s 2010 budget estimates submitted to Congress, it provided a 2009 flyaway cost of approximately \$141 million per aircraft.²¹

None of these numbers is a good news story. F-22 detractors generally cite PAUC and argue the U.S. should have cut its losses and cancelled the program long ago.²² F-22 supporters, on the other hand, argue that most of PAUC growth occurred as the planned total number of F-22s dropped, “because the large research, development,

¹⁷ Ibid.

¹⁸ Ibid. See also, Government Accountability Office, *Defense Acquisitions: Production and Fielding of Missile Defense Components Continue with Less Testing and Validation Than Planned*, (Washington, DC: Government Accountability Office, March 2009), 11, <http://www.gao.gov/new.items/d09338.pdf> (accessed 4 December 2009).

¹⁹ The author calculated this number by combining prior year, 2008, 2009, 2009 supplemental, and 2010 total procurement costs and dividing by 175 aircraft. Department of the Air Force, SAF/FMB, “Committee Staff Procurement Backup Book: Fiscal Year (FY) 2010 Budget Estimates, Aircraft Procurement, Air Force,” vol. 1, May 2009, 1-15, 1-16, <http://www.saffm.hq.af.mil/shared/media/document/AFD-090511-090.pdf> (accessed 4 December 2009).

²⁰ GAO, *Defense Acquisitions*, 11.

²¹ Department of the Air Force, SAF/FMB, 1-15.

²² See, for example, Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (Washington, DC: Congressional Budget Office, March 1997), http://www.fas.org/man/congress/1997/cbo_deficit/index.html (accessed 4 December 2009).

test and evaluation investment—over \$24.3 billion—had to be allocated to fewer and fewer aircraft.”²³ Still, this does not explain the concomitant growth in APUC. In 1988, the Air Force estimate for APUC was approximately \$60 million (2009 dollars).²⁴ Thus, the final APUC of over \$190 million represented an increase of over 316 percent. Most experts blame this cost increase on a combination of Air Force acquisition mismanagement, changing requirements, politically-driven schedule slips, and a decrease in aircraft procurement per year.²⁵

Regardless of the methodology used to measure the F-22’s cost increases, and irrespective of its causes, in the end the cost of the aircraft exceeded what the nation was willing to spend for it. The Air Force argued for years the F-22 was worth its price tag, and Secretary Donley and General Schwartz implied as much in a letter to Senator John McCain in July 2009. Their letter began by noting the “F-22 is the most capable fighter in our military inventory and, arguably, the world.”²⁶ Yet, while Donley and Schwartz recommended the U.S. “focus procurement on modern 5th generation aircraft,” they went on to note when assessing whether or not to advocate for continued F-22 production, “this decision has increasingly become a zero-sum game.”²⁷ In the end, the two men admitted that while assessing Air Force priorities, they did so “in the context of available

²³ Watts, “The F-22 Program in Retrospect,” 3.

²⁴ Ibid.

²⁵ Ibid., 4. See also, Anthony H. Cordesman and Hans Ulrich Kaeser, “America’s Self-Destroying Airpower: Becoming Your Own Peer Threat,” Center for Strategic and International Studies, updated 9 February 2009), 17-18, http://csis.org/files/media/csis/pubs/090223_aircraft_modernstudy.pdf (accessed 10 February 2010).

²⁶ Senator McCain was the ranking minority member of the Senate Armed Services Committee at the time. Norton A. Schwartz and Michael B. Donley, memorandum to The Honorable John McCain, 13 July 2009, 1, http://mccain.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=5278b80d-d69d-43d6-904f-6a0b37b3a099 (accessed 25 January 2010).

²⁷ Ibid., 2.

resources.”²⁸ Clearly, cost drove the Air Force to accept a fleet of only 187 aircraft, of which only approximately 130 would be “combat-coded.”²⁹ From this perspective, then, the aircraft *was* simply too expensive. The cost of the F-22 in light of available resources was suboptimal.

Even with suboptimal costs driving a fleet size of around 130 combat aircraft, the outcome of the F-22 saga still could be more optimal if this final number of aircraft was somewhere close to that required, even if that outcome came about by accident.

Unfortunately, this does not appear to be the case. Detractors of the F-22 program argue the U.S. bought too many—and perhaps should have bought none at all. From their perspective, the F-22 represented a “Cold War relic”³⁰ that was “designed to achieve air superiority over Soviet fighter jets, which will never be built.”³¹ The implication inherent in these arguments is that with the passing of the Soviet Union as a threat, so too went any need for building the F-22.

Proponents of the F-22 countered that the Air Force needed 381 aircraft to equip each of its ten Air Expeditionary Forces with a 24-aircraft Raptor squadron. Fewer aircraft, they concluded, would incur unacceptable risk.³² Although Schwartz and Donley ultimately backed Secretary Gates’ termination of F-22 production, they had

²⁸ Ibid. The two men make a similar argument in their *Washington Post* op-ed. Schwartz and Donley, “Moving Beyond the F-22.”

²⁹ The Air Force has lost two F-22s in aircraft accidents. The remaining 45 are test and training aircraft. See also Watts, “The F-22 Program in Retrospect,” 4.

³⁰ National Security Network, “Rejecting F-22, Senate Embraces 21st Century Defense Strategy,” 22 July 2009, <http://www.nsnetwork.org/node/1368> (accessed 7 December 2009).

³¹ Larry Korb, “The Best Weapons Money Can Buy,” Center for American Progress, 13 August 2005), http://www.americanprogress.org/issues/2005/08/b837247_ct1327177.html (accessed 7 December 2009). Of note, Larry Korb served as an Assistant Secretary of Defense from 1981-1985.

³² This viewpoint is summarized in Watts, “The F-22 Program in Retrospect,” 4.

earlier concluded 243 aircraft would provide “a moderate risk force.”³³ Finally, General Corley, shortly before retiring, summarized his command’s analysis of F-22 requirements. Corley began by noting his concurrence with the requirement for 381 Raptors. He then stated he agreed with Donley and Schwartz that “a moderate risk force can be obtained with an F-22 fleet of approximately 250 aircraft.” His bottom line was unequivocal:

In my opinion, a fleet of 187 F-22s puts execution of our current national military strategy at high risk in the near to mid term. To my knowledge, there are no studies that demonstrate that 187 F-22s are adequate to support our national military strategy.³⁴

Thus, the one item on which F-22 detractors and proponents appear to agree is that 187 aircraft is definitely not the right number. Whether for or against the program all would agree the outcome of the F-22 saga in terms of numbers purchased is suboptimal.

Finally, neither the F-22’s detractors nor its proponents are altogether satisfied with the capabilities fielded on the Raptor. Detractors generally focus on the F-22’s air-to-ground shortcomings. Currently, the F-22 can carry two 1000-lb Joint Direct Attack Munitions, which pilots can target either by programming coordinates pre-flight via a computerized mission planning system or through manual entry once in the aircraft. The implication of this mechanism is that the pilot cannot currently find a target using on-board sensors, nor can he or she attack a target found visually. Someone else must find the target and pass its coordinates to the F-22 pilot.³⁵ Detractors argue these shortfalls

³³ Schwartz and Donley, “Moving Beyond the F-22.”

³⁴ General John D.W. Corley, memorandum to The Honorable Saxby Chambliss, 9 June 2009, http://www.militarytimes.com/static/projects/pages/061809af_corley.pdf (accessed 7 December 2009). See Watts, “The F-22 Program in Retrospect,” 5-11, for a discussion of some of the specific risks F-22 proponents see inherent in F-22 production termination.

³⁵ This capabilities discussion is based on the author’s experience flying the F-22 during operational test and evaluation and in an operational F-22 wing.

make the F-22 unsuitable for the rapidly changing operational environment that characterizes 21st century insurgent-type conflicts.³⁶

Proponents of the F-22 reject the assumption that only insurgent-type conflicts will occur in the future. Still, the program's supporters agree the Raptor's air-to-ground capability requires modernization. As a result, the Air Force is upgrading the F-22's synthetic aperture radar with ground mapping capability—giving the aircraft the ability to self-target JDAMs using on board sensors—and it is modernizing the F-22's air-to-ground payload to allow carriage of up to eight Small Diameter Bombs.³⁷ Equally important to F-22 proponents, however, is upgrading the F-22's air-to-air capability. Most older fighter aircraft in the Air Force inventory now carry advanced versions of the AIM-9 and AIM-120 that are not compatible with the F-22. Accordingly, Air Force plans include adding this capability to combat-coded F-22s.³⁸ Of course, most fighter aircraft eventually undergo modernization in order to update their capability with new technologies.³⁹ What makes the F-22 situation unique, however, is that the Air Force planned the modernization program for the F-22 well in advance, knowing the aircraft

³⁶ Korb, "The Best Weapons Money Can Buy," and, Lawrence J. Korb and Krisila Benson, "A Jet Even the Military Doesn't Want: The F-22 isn't Useful in Afghanistan or Iraq, Why would Congress Order More?" Center for American Progress, 9 July 2009, http://www.americanprogress.org/issues/2009/07/f22_oped.html (accessed 7 July 2009).

³⁷ House Armed Services Subcommittee on Air and Land Forces, *Statement of Lieutenant General Mark D. Shackelford*, 25 March 2009, 9, http://appropriations.house.gov/witness_testimony/DE/Mark_Shackelford_03_25_09.pdf (accessed 7 December 2009).

³⁸ House Armed Services Subcommittee on Air and Land Forces, *Statement of Lieutenant General Mark D. Shackelford*, 10. The upgraded missiles are the AIM-9X and AIM-120D. Funding availability will determine how many combat- and test/training-coded F-22s the Air Force will upgrade. See Michael Sirak, "Honed to a Razor's Edge," *airforcemagazine.com*, 26 May 2009, <http://www.airforce-magazine.com/Features/modernization/Pages/HonedtoaRazor%E2%80%99sEdge.aspx> (accessed 7 December 2009).

³⁹ The F-15C Multi-Stage Improvement Program (MSIP) and F-16 Common Configuration Implementation Program (CCIP) are two relevant examples. See *GlobalSecurity.org*, "F-15 Eagle: Service Life," no date, <http://www.globalsecurity.org/military/systems/aircraft/f-15-life.htm> (accessed 7 December 2009); and, "Modernization of the F-16 Fleet," *defense-update.com*, updated 6 November 2005, <http://www.defense-update.com/features/du-1-04/f-16-upgrades.htm> (accessed 7 December 2009).

would not meet all the service's requirements when initially fielded.⁴⁰ Thus, even four years after the Air Force declared the first F-22 squadron had reached initial operational capability (IOC), the aircraft's new, state-of-the-art capabilities suite pleased neither its detractors *nor* its proponents. In other words, the F-22's capabilities represented a suboptimum outcome to both those who loved it and those who hated it.

A New Civil-Military Relations Norm

The sub-optimization of the F-22 program—in terms of excessive cost, numbers of aircraft purchased, and capability shortfalls—conforms to the historical pattern which suggests a lack of synthesis between military and civilian considerations in strategy development.⁴¹ The F-22 case study suggests the cause of this dysfunction is a lack of collaboration between senior military and civilian leaders driven by incongruent models of civil-military relations. The Air Force perceived programming and purchasing of major weapons systems as primarily a service responsibility.⁴² Thus, when senior defense department leaders challenged and ultimately rejected the Air Force's argument to keep the F-22 production open, the Air Force viewed this as civilian intrusion on military prerogatives. From the perspective of the Secretary of Defense, on the other

⁴⁰ Another significant issue which pleased neither side was the F-22's maintainability. For a discussion of this issue and the modernization plan in general, see John T. Bennett, "Runaway Raptor Costs: DoD Buying Chief Slams F-22 Upgrades, Upkeep," *defensenews.com*, 24 November 2008. <http://www.defensenews.com/story.php?i=3833832&c=FEA&s=CVS> (accessed 7 December 2009).

⁴¹ See Cordesman and Kaeser, "America's Self-Destroying Airpower," for a brief examination of several other aircraft procurement programs which may also conform to this trend. For a summary of recent Army programs with similar issues, see Edward F. Bruner, *Army Transformation and Modernization: Overview and Issues for Congress* (Washington, DC: Congressional Research Service, 24 January 2003, <http://www.au.af.mil/au/awc/awcgate/crs/rs20787.pdf> (accessed 25 January 2010)).

⁴² World War II contained the roots of this belief, common to all of the Services. See Brian Waddell, *Toward the National Security State: Civil-Military Relations during World War II* (Westport, Connecticut: Praeger, 2008). This perception persists despite Secretary of Defense Robert McNamara's adjustments to the defense programming process. For a discussion of McNamara's influence, see Charles L. Cochran, *Civil-Military Relations: Changing Concepts in the Seventies* (New York: MacMillan Publishing Company, 1974).

hand, Air Force intransigence on the F-22 issue was borderline insubordination.

Eventually, Secretary Gates' frustration with the Air Force on this issue would lead to his request for the resignation of both the Secretary and Chief of Staff of the Air Force.⁴³ In this environment, collaboration became impossible. Ultimately, therefore, the failure to resolve these conflicting visions was the main cause of the sub-optimization of the F-22 program.

The idea that civil-military relations can affect strategic outcomes is not a new one. Indeed, a rich literature documents that "the ways in which civilian political leaders relate to their military establishments can have a powerful effect on foreign policy behavior."⁴⁴ Others have focused on the correlation between the health and manner of civil-military relations and military effectiveness.⁴⁵ Too often, however, civil-military relations literature focuses myopically on whether or not a crisis exists.⁴⁶ As one scholar has sarcastically put it, "no coup, no problem."⁴⁷ Unfortunately, the causal link between suboptimal strategic outcomes and civil-military relations indicates there *is* a problem. As Oxford historian Hew Strachan has argued, instead of worrying about threats of a

⁴³ Erik Holmes, "Wynne Takes Aim at Gates over Firing, Reasons," *airforcetimes.com*, 11 July 2008, http://www.airforcetimes.com/news/2008/07/airforce_wynne_070908w/ (accessed 23 September 2009). See also Representative Clifford Stearns, "Air Force General Moseley and Secretary Wynne should be Honored, Not Fired."

⁴⁴ David A. Welch and Noboru Yamaguchi, "Soldiers, Civilians, and Scholars: Making Sense of the Relationship between Civil-Military Relations and Foreign Policy," *Asian Perspective* 29, no. 1 (2005): 214. Footnote 4 contains a full listing of scholarly works supporting this contention.

⁴⁵ A good summary of the various treatments of this subject is Suzanne C. Nielsen, "Civil-Military Relations Theory and Military Effectiveness," *Policy and Management Review* 2, iss. 2 (2002): 1-21.

⁴⁶ For a look at multiple viewpoints on this subject, see Don M. Snider and Miranda A. Carlton-Carew, ed., *U.S. Civil-Military Relations: In Crisis or Transition* (Washington, DC: The Center for Strategic and International Studies, 2006).

⁴⁷ Bacevich, "The Paradox of Professionalism," 303.

coup, “the real danger for Western democracies is the failure to develop coherent strategy.”⁴⁸

The existence of unresolved differences in military and civilian perceptions of how their relationships ought to work suggests neither Feaver’s agency theory nor Huntington’s objective control satisfy the goal of optimizing strategy. Agency theory’s previously discussed acceptance of suboptimal outcomes as a necessary evil to ensure civilian supremacy disqualifies it from consideration. Meanwhile, Huntington falls short for the simple yet fatal reason that his theory’s description of separate civilian and military spheres does not pass muster with reality.⁴⁹ After all, the climax of the F-22 saga was Secretary Gates’ direct intrusion into the military sphere. Similarly, historian Andrew Roberts has demonstrated an absence of separate political and military spheres among U.S. and U.K. leadership during World War II. General George C. Marshall, Army Chief of Staff, and Field Marshall Alan Brooke, Chief of the Imperial General Staff (CIGS), both weighed in with Roosevelt and Churchill on political matters. For example, Brooke argued forcefully that the Allies need to delay the cross-channel invasion of Europe until 1944. While Brooke focused on the military factors in his reasoning, he also understood the political implications of such a delay. Accordingly, he reminded Churchill of the need maintain the appearance of an impending invasion to assuage the Russians.⁵⁰ Likewise, the civilian leaders felt no compunction to forswear involvement in the military sphere. Roosevelt helped to determine the time and place of

⁴⁸ Hew Strachan, “Making Strategy: Civil-Military Relations after Iraq,” 79.

⁴⁹ Others share this assessment. See, for example, Andrew Bacevich, “The Use of Force in our Time,” *Wilson Quarterly* 19 (Winter 1995): 50-63.

⁵⁰ Andrew Roberts, *Masters and Commanders: How Four Titans Won the War in the West, 1941-1945* (New York: HarperCollins, 2009), 221-226.

Operation Torch, the 1942 invasion of North Africa, and Churchill proposed a variety of operations the CIGS would block. Roosevelt even colluded with Brooke to stymie Marshall's plans to invade the Andaman Islands.⁵¹

This confrontational collaboration between American and British political and military leaders was key to the development and execution of wartime strategy during World War II. As Roberts concluded, the decisions of the Allied civilian and military leaders “were produced through hard-fought interaction using logical debate and compromise, over many months of constant and unimaginable stress that would have shattered lesser men.”⁵² Thus, a civil-military norm that rejected the notion of separate military and civilian spheres created a more-or-less coherent grand strategy that ultimately led to victory in the greatest conflict in the history of humankind. It seems reasonable to posit a similar norm could have resulted in a more optimal result in the more benign environment of the F-22 acquisition program.

Adopting a collaborative norm for civil-military relations would not directly conflict with agency theory. Indeed, agency theory suggests such a norm would decrease the friction inherent in intrusive monitoring and punishment techniques. As Feaver notes, “compliance is far more efficiently gained when agents share the preferences of the principal.”⁵³ Rather than supplanting agency theory and tossing out its descriptive value, a norm creating an expectation of collaboration could exist as a subset of agency theory. Given such an expectation, civilian principals would need to resort to the more intrusive tools of agency theory only if the norm broke down and collaboration failed.

⁵¹ Ibid., 577.

⁵² Ibid., 574.

⁵³ Feaver, *Armed Servants*, 87.

The same is not true with respect to Huntington's idea of objective control. Rather than accept separate spheres of military and civilian competence, a collaborative norm blurs the line between these two areas. Huntington specifically warned against such "fusionist" ideas in civil-military relations, fearing it would lead to the politicization of the officer corps.⁵⁴ Boston University professor Andrew Bacevich agreed with Huntington, finding President Eisenhower's disagreements with Army leadership after World War II began a series of events that ultimately led to "compromising the military establishment's senior leadership."⁵⁵ Others have similarly concluded in recent years that "officers have grown less neutral and more partisan in their political identification."⁵⁶

While the partisan affiliation of officers does indeed appear to have increased,⁵⁷ it is less clear whether or not this has affected national policy in any discernible way. One study found that although the tendency of senior officers to affiliate with a political party has increased

[t]he commissioned officer corps ... does not proselytize among its subordinates, organize politically, contribute financially to campaigns to any significant degree or, apparently, vote in large numbers. There is no real evidence that the military has become increasingly partisan in an electoral sense, or that it plays an important role in election outcomes.⁵⁸

Furthermore, the study concluded, the fact that senior officers are more likely to affiliate with a party has not resulted in shirking. "On virtually every issue [during the 1990s], the military chiefs made their case with conviction, but acquiesced loyally and worked

⁵⁴ Huntington, *The Soldier and the State*, 350-352, 460.

⁵⁵ Bacevich, "The Paradox of Professionalism," 333.

⁵⁶ Don Snider, "America's Postmodern Military," *World Policy Journal* 17, iss. 1 (Spring 2000), <http://www.proquest.com/> (accessed 30 July 2009).

⁵⁷ Peter Feaver and Richard H. Kohn, "Conclusion: the Gap and What it Means for American National Security," in *Soldiers and Civilians: The Civil-Military Gap and American National Security*, ed. Peter Feaver and Richard H. Kohn (Cambridge, MA: MIT Press, 2001), 465.

⁵⁸ Richard D. Hooker, Jr., "Soldiers of the State: Reconsidering American Civil-Military Relations," *Parameters* 33, iss. 4 (Winter 2003/2004), 8-9, <http://www.proquest.com/> (accessed 30 July 2009).

hard to implement the decisions of the political leadership.”⁵⁹ Other civil-military scholars agree. For example, Douglas Johnson and Steven Metz, both professors at the U.S. Army War College, found little evidence “that military involvement in policy-making changes the outcome in some undesirable way. The basis of [the anti-fusionist] argument thus seems based primarily on nostalgia and fear of change.”⁶⁰

The failure of Huntington’s concerns with fusionist models to manifest themselves is fortunate as this allows military leaders to consider the policy and political implications of their advice. Ultimately, military advice is more valuable to civilian leaders when it takes into account the broader strategic environment. As President Kennedy stated in a National Security Action Memorandum,

While I look to the Chiefs to present the military factor without reserve or hesitation, I regard them to be more than military men and expect their help in fitting military requirements into the overall context of any situation, recognizing that the most difficult problem in Government is to combine all assets in a unified, effective pattern.⁶¹

The implication in President Kennedy’s statement is that, while the military perspective is important, military advice given in a military vacuum is of little strategic value.

Kennedy’s insight comports with that of famed Prussian strategist Carl von Clausewitz who wrote that “war should never be thought of as something autonomous but always as an instrument of policy.... [Therefore] wars must vary with the nature of their motives and of the situations which give rise to them.”⁶² Although concerned about

⁵⁹ Hooker, “Soldiers of the State,” 10. Hooker does note the oft-cited exception of military resistance to President Clinton’s intention to allow gays to serve openly.

⁶⁰ Douglas Johnson and Steven Metz, “Civil-Military Relations in the United States: The State of the Debate,” *The Washington Quarterly* 18, no. 1 (Winter 1995): 194, <http://www.lexisnexis.com> (accessed 30 July 2009).

⁶¹ Quoted in Lt. General Victor H. Krulak, USMC, (Ret.), *Organization for National Security: A Study* (Washington, DC: United States Strategic Institute, 1987), 85-86.

⁶² Carl von Clausewitz, *On War*, indexed edition, trans. and ed. Michael Howard and Peter Paret

the potential politicization of the officer corps, Andrew Bacevich concurs with this broader point. For him, a “sharp distinction between war and politics ... [eliminates] any possibility of strategic coherence.”⁶³ Similarly, Admiral William Crowe, the first Chairman of the Joint Chiefs of Staff after the landmark Goldwater-Nichols legislation strengthened the position, sought to use his expanded role to help regain this coherence. In doing so, Crowe concluded he “was obligated to give overall rather than simply military advice to the president.”⁶⁴

Another key aspect of military advice and actions is that they must preserve the civilian leadership’s “political freedom of action.”⁶⁵ Doing so circumscribes any danger of military officer politicization through participation in the policy process. Conversely, if a military officer attempts to influence the policy process outside decision-making channels, such actions are inexcusable as they are specifically designed to eliminate the politicians’ room for maneuver. To preserve this freedom of action, military advice must not be political in the partisan sense, but it must be informed by broader non-military considerations of national security.

Marine General Anthony Zinni, former Commander of U.S. Central Command, provided a telling vignette illustrating the importance of this dialogue. In the lead-up to DESERT FOX, a four-day air operation designed to punish Iraqi leader Saddam Hussein

(Princeton: Princeton University Press, 1984), 88.

⁶³ Bacevich, “A Modern Major General,” 133.

⁶⁴ Johnson and Metz, “Civil-Military Relations in the United States,” 199.

⁶⁵ Hooker argues for preserving “political freedom of action,” but his follow on thoughts indicate he might not really mean it—but I do. In Hooker’s words, civilian leaders “can force the military to do their bidding, but they cannot always do so without paying a political price.” Later, he adds, a “civilian who publicly discounts [military] advice in an area presumed to require military expertise runs significant political risks. The opposition party will surely exploit any daylight between civilian and military leaders....” Thus, it is unclear if Hooker actually believes in preserving the political room to maneuver. Hooker, “Soldiers of the State,” 14-15. Again, my assessment is that preserving the civilian leadership’s freedom of action is absolutely critical.

for failing to allow International Atomic Energy Agency inspectors access to several suspected weapons sites, General Zinni met with President Bill Clinton. Despite protestations from other senior DoD leaders, Zinni brought with him the entire Master Air Attack Plan for the operations and laid it out in front of the President. Exposing the Commander-in-Chief to this level of detail was unprecedented, yet Zinni felt it necessary to ensure President Clinton understood when and where the military would need presidential decisions.⁶⁶ Ultimately, General Zinni's politically-informed yet non-partisan dialogue with Clinton ensured the Commander-in-Chief knew the implications of presidential decisions and their timing. This knowledge precluded events from "boxing-in" the President and preserved his political freedom of action.

The contrast to the F-22 saga is telling. The Air Force never adjusted its military advice to procure 381 F-22s despite changes to the broader political-military context. For example, after the 2001 and 2003 invasions of Afghanistan and Iraq, Air Force leaders continued to advocate for robust F-22 procurement. This failure manifested itself in Secretary Gates' perception that the Air Force was focusing on the next war at the expense of current conflicts. Even more egregiously, the Air Force's short-lived and clumsy attempt to play Congress and the Secretary of Defense off each other (in public, no less) after the 2010 budget submission was a clear instance of trying to limit Gates' freedom of action. Had Gates and the Air Force collaborated early on, the situation might have been much different.

Even in a collaborative relationship, however, the civilian will always have the final say. This may explain some of the reluctance military officers have to collaborate

⁶⁶ General Anthony Zinni, presentation to the Joint Advanced Warfighting School, Norfolk, Virginia, 14 December 2009. Quoted by permission of General Zinni.

on issues with the civilian leadership. By inviting civilians into a discussion on issues the military sees as within its exclusive purview, senior officers might fear they will “compromise their autonomy.”⁶⁷ As General Zinni put it, any time a senior officer starts a dialogue on military issues with a civilian leader, the military officer risks awakening the civilian’s inner “frustrated field marshal.”⁶⁸ This fear creates a reluctance on the part of the military to engage the civilian leadership and makes it all the more important for civilian leaders to seek the military perspective. The value of this collaboration is that just as military leaders will seldom understand the full scope of policy and political impacts, the civilian leader will seldom understand the full scope of military implications. In many ways, the 1960 finding of Harvey Mansfield, a political scientist at Ohio State University, rings true still today: “[n]ot many of our civilian leaders have developed a ... grasp of weapons technology and strategy.”⁶⁹ In contemporary terms, no matter how intelligent the defense secretary is, he or she usually does not know as much about air superiority as the Air Force. Of course, the same could apply to virtually any mission set in any of the Armed Forces. The point is, defense secretaries cannot be experts on everything in their portfolio. Thus, as Feaver stated, the crux of the matter is a mutual understanding on both sides that “[c]ivilians and the military are both imperfect judges of what is needed for a national security.”⁷⁰

⁶⁷ Bacevich, “A Modern Major General,” 134.

⁶⁸ Zinni, 14 December 2009.

⁶⁹ Harvey C. Mansfield, “Civil-Military Relations in the United States,” *Current History* 38 (April 1960): 233.

⁷⁰ Feaver, *Armed Servants*, 65. Emphasis in original.

Modeling a Collaborative Civil-Military Relations Norm

Inherent in Feaver's statement is the idea that civilian and military spheres of competency do indeed exist. Whereas Huntington saw the two spheres as entirely separate, however, the F-22 case study and other historical examples show there is actually considerable overlap. Where this overlap occurs represents an area of shared competence where civilian and military elite need to collaborate on policy development. General Schwartz, Gates' pick for Air Force Chief of Staff after General Mosley's resignation, appears to agree with this need for collaboration. In an October 2009 speech to a group of international defense fellows, Schwartz summarized his view that "today's international security environment requires military leaders to be steeped in a broad variety of political-military and socio-economic disciplines, so as to possess an appreciation for the wider ramifications of military action."⁷¹

Figure 3 depicts a conceptual model for a collaborative norm for civil military relations. Three broad points merit emphasis when considering this norm. First, the rules of the road for a collaborative civil-military norm begin with the assumption of civilian primacy. This is not just a Constitutional imperative; it also reflects the primacy of broad policy (and political) concerns over purely military issues. The placement of the civilian sphere above the military sphere indicates this primacy. Second, politics (in the partisan sense) must remain beyond the scope of military competence. Even though civil-military experts disagree on the degree of politicization in the contemporary officer corps, everyone agrees that direct military involvement or, even worse, interference in partisan

⁷¹ Norton Schwartz, "International Relationships: Toward a Twenty-First Century Security," speech to the International Fellows Program Alumni Dinner, Washington, DC, 1 October 2009, <http://www.af.mil/information/speeches/speech.asp?id=514> (accessed 9 December 2009).

politics would be a catastrophe.⁷² The model's exclusion of the political portion of the civilian sphere from the area where it overlaps with the military sphere indicates this prohibition on partisan politicking for military officers.

The third consideration is largely the converse of the second. Namely, military tactics should remain beyond the scope of civilian competence. Civilians can interfere with tactics if they want to, of course, but this is seldom a prudent course of action. The most egregious example of such interference is the requirement for presidential approval of target lists during the Vietnam conflict.⁷³ The model's exclusion of the tactics portion of the military sphere from the area of overlap indicates the lack of civilian competence in tactical affairs.

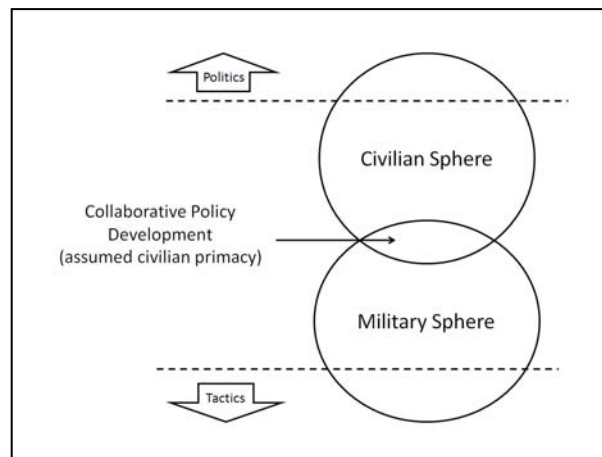


Figure 4. The Collaborative Model

Ironically, while restrictive rules of engagement in Vietnam precluded the air operations from achieving what Air Force leaders saw as appropriate military objectives, constraining airpower through such restrictions allowed the U.S. to meet its broader

⁷² For just a few examples, see any of the previously cited works by Bacevich, Hooker, Huntington, Feaver and Snider.

⁷³ Major Ricky James Drake, *The Rules of Defeat: The Impact of Aerial Rules of Engagement on USAF Operations in North Vietnam, 1965-1968*, master's thesis, School of Advanced Airpower Studies, May 1992, 32, <https://research.au.af.mil/papers/ay1992/saas/drake.pdf> (accessed 9 December 2009).

strategic objectives, namely, keeping China and Russia from entering the war.⁷⁴ Once again, had military and civilian leaders collaborated in building strategy, the Air Force could have devised a bombing operation congruent with the President's broader policy goals. This would have obviated the civilian need to manage the air war via Tuesday luncheons. In the model, the overlap between the military and civilian spheres indicates this area of shared competence, where neither civilians nor the military possess a monopoly of expertise. It is in this region where collaborative policy development must occur.

The question remains, within this collaborative space, how should military and civilian leaders relate to each other? Some have argued the solution is for military officers to provide their candid advice in private.⁷⁵ This technique comports with Secretary Gates' expectations of his military leaders. During President Obama's Afghanistan strategy review Gates expressed his belief that "it is imperative that all of us taking part in these deliberations ... provide our best advice to the president candidly but privately."⁷⁶ Adherence to such a norm capitalizes on what Feaver described as the military's "culture of subordination."⁷⁷ As such, it remains consistent with agency theory, which the F-22 case study and other historical examples confirmed provided an accurate descriptive model of civil-military relations. Furthermore, this norm also matches the prevalent expectation among military leaders for their subordinates.

⁷⁴ Ibid., 32-33.

⁷⁵ Douglas Johnson and Steven Metz, *American Civil-Military Relations: New Issues, Enduring Problems* (Carlisle, Pennsylvania: Strategic Studies Institute, 24 April 1995), 20, <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub287.pdf> (accessed 26 January 2010).

⁷⁶ Ann Scott Tyson and Scott Wilson, "Gates Wants Leaders' War Advice Kept Private: Admonition Follows Comments on War by U.S. Commander," *washingtonpost.com*, 6 October 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/10/05/AR2009100500631.html> (accessed 9 December 2009).

⁷⁷ Feaver, *Armed Servants*, 80.

Military leaders expect subordinates to offer their best advice and counsel—in private. Once the advice is given and the leader decides on a course of action, a leader expects his or her subordinates to comply with the decision and implement it to the best of their ability.⁷⁸ Albert Pierce, a professor of ethics at the National Defense University, sees this construct as applicable at the civil-military level as well. According to Dr. Pierce, military officers have the obligation to give the best advice possible before civilian leaders make a decision. After the decision is made, however, military officers should salute smartly and carry out the decision. Similarly, in private, military officers should feel free to offer candid advice—as Pierce said, “pound the table if you have to!” In public, however, such advice is subject to severe constraints and generally only acceptable in the context of congressional testimony.⁷⁹

In line with this construct, President Eisenhower, uniquely situated in history as a senior military officer who later became the civilian commander-in-chief, expected that after giving his military advisors an opportunity to provide their inputs, they were obligated to support his decision whether or not it went their way.⁸⁰ Having military subordinates provide inputs, however, is collaborative only in a superficial sense. True collaboration accepts the development of strategy is a task neither civilian political leadership nor senior military leaders *can* accomplish on their own. The exclusive competency of civilian leaders in the political sphere, and the exclusive competency of the military in the tactical sphere, requires collaboration in order to synchronize actions at

⁷⁸ For an excellent example of this, see U. S. Army, *Field Manual 22-100: Army Leadership* (Washington, DC: Department of the Army, 31 August 1999), para. 1-62 – 1-71.

⁷⁹ Dr. Albert Pierce, presentation to the Joint Advanced Warfighting School, Norfolk, Virginia, 15 December 2009. Quoted by permission of Dr. Pierce.

⁸⁰ Bacevich, “Eisenhower and his Generals,” 310.

the tactical level with policy and strategy. Indeed, this requirement to link the political and strategic with the tactical is the original purpose of operational art as the concept's Soviet forebears defined it. Under this concept, operational art "facilitated the two-way conversation between tactics and strategy."⁸¹ Under the collaborative model of civil-military relations espoused here this conversation should not occur only during operational planning, but also outside of wartime or contingency operations.

The collaborative relationship also solves the problems inherent in developing coherent strategy in an era characterized by complexity. Dr. Harry Yarger of the U.S. Army's Strategic Studies Institute notes the strategic environment today is

characterized by greater or less degrees of chaotic behavior and complexity... It has external and internal components, i.e., the international environment and the domestic environment, respectively. Rational and irrational choice, chance and probability, competitors, allies, and other actors are all part of the strategic paradigm.⁸²

Dr. Gregory Foster of National Defense University contends the best way to deal with such a complex environment is "transparent collaborative dialogue among all the parties to the civil-military relationship."⁸³ Retired Royal Navy Rear Admiral Chris Perry, former director the United Kingdom's joint Doctrine and Concepts Center, agrees. "There is a need for a sophisticated dialogue [between politicians and the military]. We need a return to a vigorous and rigorous dialogue to reach strategic coherence."⁸⁴

Admiral Perry cites the complex interplay between President Abraham Lincoln and

⁸¹ Justin Kelly and Michael J. Brennan, "The Leavenworth Heresy and the Perversion of the Operational Art," *Joint Force Quarterly* 56 (1st quarter 2010): 113.

⁸² Harry D. Yarger, *Strategic Theory for the 21st Century: The Little Book on Big Strategy* (Carlisle, Pennsylvania: Strategic Studies Institute, 2006), 65, <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB641.pdf> (accessed 3 February 2010).

⁸³ Foster, "Civil Military Relations: The Postmodern Democratic Challenge," 99. For a discussion of the complex modern environment, see 91-92.

⁸⁴ Rear Admiral Chris Perry, presentation to Joint Advanced Warfighting School, Norfolk, Virginia, 13 December 2009. Quoted by permission of Admiral Perry.

General Ulysses S. Grant as an example of the required collaboration. “One of the reasons Grant did so well is that he understood the political pressures on Lincoln and factored them into his planning.”⁸⁵

Huntington and his acolytes argue that military involvement in the policy-making process threatens to politicize the officer corps and militarize the development of national security strategy. Interestingly, the F-22 case study suggests the opposite may be true. Prior to Secretary Gates’ decapitation of the Air Force, the service acted within the paradigm of the Huntington concept of objective control. Yet it was during this time that the Air Force was most resistant to civilian control. Interestingly, adhering to Huntington’s precepts caused OSD and Air Force leaders to violate several tenets of the collaborative norm proposed above. First, the Air Force misread the reality of civilian primacy in the largely strategic decision of how many F-22s to purchase. Second, neither OSD nor the Air Force ever attempted to engage in a dialogue to rectify political and tactical considerations. As a result, the Air Force failed to recognize the political and policy constraints on OSD’s civilian leaders, and OSD did not appreciate the Air Force’s perspective on the tactical requirement for the Raptor. Third, in lieu of closed-door dialogue, the Air Force chose to “go public” with its disagreement on the F-22.

The arrival of General Schwartz and Secretary Donley brought subtle yet significant changes to the Air Force’s behavior. In many ways, these changes rejected Huntingtonian notions of objective control and embraced the tenets of collaboration. Namely, Schwartz and Donley understood clearly that OSD had the final say on F-22

⁸⁵ Rear Admiral Chris Perry, email to the author, 16 December 2009. Admiral Perry draws his assessment of the Lincoln-Grant relationship from James M. McPherson, *Tried by War: Abraham Lincoln as Commander in Chief* (New York: Penguin, 2008).

numbers, they understood the fiscal and political constraints on the F-22 program, and they kept their counsel to Secretary Gates private. Unfortunately, these changes likely occurred not because the Air Force's new leadership team conceived the need for a new norm of collaboration with civilian leadership, but rather as a result of the monitoring and control mechanisms of agency theory. Thus, in the end, the lack of collaboration between OSD and the Air Force throughout the F-22 saga confirms that the current civil-military concepts prevalent among senior civilian and military leaders drive sub-optimal strategic outcomes. Neither Huntington nor Feaver provide a model useful for solving this problem. In fact, both models only serve exacerbate it. The solution is to reject these traditional models and adapt a collaborative norm for civil-military relations.

CHAPTER 5

CONCLUSION

Through a robust examination of conflicts throughout the Cold War and in the decade that followed, Feaver concludes “[c]ivil-military relations in the United States...are about bargaining, monitoring, and strategic calculations over whether to work or shirk.”¹ The F-22 case study suggests agency theory is descriptively accurate despite the fact that military officers have long embraced Huntington’s vision of a separate sphere of military competency.² What agency theory neglects, however, is to prescribe how civil-military relations should work to best effect in the United States. The ultimate objective is to provide for the common defense—to maintain the security of the nation. Thus, the salient issue is not *how* civil-military relations works, but *if* civil-military relations work. If they do not, the task then becomes to move beyond descriptive models and find a new prescription for how American civil and military leaders should interact to optimize policy outcomes.

The F-22 case study demonstrates how adherence to current civil-military relationship models creates discord and can lead to a sub-optimization of national strategy. A more complete understanding of civil-military relations would reduce friction and optimize the interaction among our military and civilian leaders, thus qualitatively improving the national defense. While Huntington rightly identified distinct areas of military and civilian competence, his theory falls short in that it does not account for overlap between these two spheres. On the one hand, the military needs to understand

¹ Feaver, *Armed Servants*, 282.

² The best example of this attitude is the idea that once politicians make the decision to go to war, the military should left along to execute it. Colin Powell was a leading proponent of this concept. See Powell, “U.S. Forces: Challenges Ahead,” 32-45.

there are real limits to freedom of action within the military sphere. In the F-22 case, it became vividly clear in the spring of 2009 that ultimate authority for halting or continuing production did not lie within the Air Force, but with its civilian masters. On the other hand, Feaver's principal-agent model does not adequately address the appropriate level of professional military influence in the policy realm. Air Force leaders held their ground on the F-22 because of their particular competencies, perspectives and perceived mission priorities. Civilian leaders should not expect (or desire) military leaders to accept their guidance simply because of civilians control the military, or because of agency theory consequences of monitoring or punishment. Competence in national strategy demands more than mere acquiescence to Feaver's claim that "civilians have the right to be wrong."³

Both the Department of Defense and Air Force leaders fundamentally misunderstood the nature of their civil-military relationship. Indeed, the long and arduous path to termination of F-22 production was less a contest of wills and more a contest between civil-military models. The fact that neither Huntington's model nor Feaver's theory emerge unscathed from the case study suggests the need for a new normative model for civil-military relations. This new norm must capitalize on the different competencies and expertise of senior civilians and military officers and optimize their relationships in order to develop a more coherent and effective strategy for national defense.

The solution to this is a collaborative norm. The interaction in the area where civilian and military spheres overlap has the potential to be contentious. Accordingly, the

³ Feaver, *Armed Servants*, 298.

collaborative norm should incorporate proven leadership concepts and focus on the confidential nature of military advice and dissent. Additionally, the principles of civilian primacy, lack of military competence in politics, and lack of civilian competence at the tactical level must bound behavior under the collaborative norm. Where history records this kind of collaboration between civilian and military leaders, strategy is more coherent and outcomes more optimum.

Unfortunately, this was not the case in the F-22 saga. As a result of differing constructs for civil-military relations, the Office of the Secretary of Defense and the Air Force leaders failed to collaborate or even engage in dialogue. As a result, the Air Force—and the nation—purchased an inappropriate number of aircraft with less than optimal capability that cost too much. The U.S. can ill afford for such sub-optimum outcomes to become the norm. The complexity of the current strategic environment demands more. Civilian and military leaders must recognize that only by capitalizing on each other's unique competencies will they be able to navigate the increasingly complicated and convoluted security milieu. The U.S. must adopt a collaborative norm for civil-military relations if it hopes to succeed in developing coherent and effective national security strategy.

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BIBLIOGRAPHY

Books and Theses

- Aronstein, David C., Michael J. Hirschberg and Albert C. Piccirillo. *Advanced Tactical Fighter to F-22 Raptor: Origins of the 21st Century Air Dominance Fighter*. Reston, Virginia: American Institute of Aeronautics and Astronautics, 1998.
- Clausewitz, Carl von. *On War*. Indexed edition. Edited and translated by Michael Howard and Peter Paret. Princeton: Princeton University Press, 1984.
- Cochran, Charles L. *Civil-Military Relations: Changing Concepts in the Seventies*. New York: MacMillan Pub Co., 1974.
- Cohen, Eliot A. *Supreme Command*. New York: Random House, 2002.
- Cole, Ronald H. *Operation Urgent Fury: Grenada*. Washington, DC: Joint History Office, Office of the Chairman of the Joint Chiefs of Staff, 1997.
- Department of the Army. *Field Manual 22-100: Army Leadership*. Washington, DC: Department of the Army, 31 August 1999.
- Drake, Ricky James. *The Rules of Defeat: The Impact of Aerial Rules of Engagement on USAF Operations in North Vietnam. 1965-1968*. Master's Thesis. School of Advanced Airpower Studies, May 1992). <https://research.au.af.mil/papers/ay1992/saas/drake.pdf> (accessed 9 December 2009).
- Feaver, Peter D. *Armed Servants: Agency, Oversight, and Civil-Military Relations*. Cambridge: Harvard University Press, 2005.
- , *Guarding the Guardians: Civilian Control of Nuclear Weapons in the United States*. Ithaca: Cornell University Press, 1992.
- Feaver, Peter D. and Richard H. Kohn, eds. *Soldiers and Civilians: The Civil-Military Gap and American National Security*. Cambridge, Massachusetts: MIT Press, 2001.
- Franks, Tommy. *American Soldier*. New York: HarperCollins, 2004.
- Herspring, Dale R. *The Pentagon and the Presidency: Civil-Military Relations from FDR to George W. Bush*. Lawrence, Kansas: University of Kansas Press, 2006.
- Huntington, Samuel. *The Soldier and the State: The Theory and Politics of Civil-Military Relations*. New York: Vintage Books, 1957.
- , *The Soldier and the State: The Theory and Politics of Civil-Military Relations*. Cambridge, Massachusetts: Belknap Press, 2005.

- Huntington, Samuel and Andrew J. Goodpastor. *Civil-Military Relations*. Washington, DC: American Enterprise Institute for Public Policy Research, 1977.
- Johnson, Douglas and Steven Metz. *American Civil-Military Relations: New Issues, Enduring Problem*. Carlisle, Pennsylvania: Strategic Studies Institute, 24 April 1995. <http://www.strategicstudiesinstitute.army.mil/pdf/pub287.pdf> (accessed 26 January 2010).
- Krulak, Victor H. *Organization for National Security: A Study*. Washington, DC: United States Strategic Institute, 1987.
- McPherson, James M. *Tried by War: Abraham Lincoln as Commander in Chief*. New York: Penguin, 2008.
- Roberts, Andrew. *Masters and Commanders: How Four Titans Won the War in the West. 1941-1945*. New York: HarperCollins, 2009.
- Snider, Don M. and Miranda A. Carlton-Carew, eds. *U.S. Civil-Military Relations: In Crisis or Transition*. Washington, DC: The Center for Strategic and International Studies, 2006.
- Spanier, John W. *The Truman-MacArthur Controversy and the Korean War*. New York: W.W. Norton, 1965.
- Van Evera, Stephen. *Guide to Methods for Students of Political Science*. Ithaca, New York: Cornell University Press, 1997.
- Waddell, Brian. *Toward the National Security State: Civil-Military Relations during World War II*. Westport, Connecticut: Praeger, 2008.
- Williams, Michael D. *Acquisition for the 21st Century: The F-22 Development Program*. Washington, DC: National Defense University Press, 1999.
- Woodward, Bob. *State of Denial*. New York: Simon and Schuster, 2004.
- Yarger, Harry D. *Strategic Theory for the 21st Century: The Little Book on Big Strategy*. Carlisle, Pennsylvania: Strategic Studies Institute, 2006.

Academic Journals, Papers, and Presentations

- Bacevich, Andrew J. "The Paradox of Professionalism: Eisenhower, Ridgeway, and the Challenge to Civilian Control, 1953-1955." *The Journal of Military History* 61, vol. 2 (April 1997): 303-333.
- , "The Use of Force in our Time." *Wilson Quarterly* 19 (Winter 1995): 50-63.

- Desch, Michael C. "Bush and the Generals." *Foreign Affairs* 86, iss. 3 (May/June 2007). <http://www.proquest.com/> (accessed 3 August 2009).
- Feaver, Peter D. "An Agency Theory Explanation of American Civil-Military Relations during the Cold War." Program for the Study in Democracy, Institutions and Political Economy, Duke University. 5 November 1997. <http://www.poli.duke.edu/dipe/Feaver1.pdf> (accessed 10 December 2009).
- Finelli, Frank. "Transforming Aerospace Power." *Airpower Journal* (Summer 1999): 4-15.
- Fogleman, Ronald R. "Aerospace Doctrine: More than Just a Theory." *Airpower Journal* (Summer 1996): 40-47.
- Foster, Gregory D. "Civil-Military Relations: The Postmodern Democratic Challenge." *World Affairs* 167, no. 3 (Winter 2005): 91-100.
- Goldstein, Lyle J. "General John Shalikashvili and the Civil-Military Relations of Peacekeeping." *Armed Forces and Society* 26, iss. 3 (Spring 2000): 387-411.
- Hooker, Richard D., Jr. "Soldiers of the State: Reconsidering American Civil-Military Relations." *Parameters* 33, iss. 4. <http://www.proquest.com/> (accessed 30 July 2009).
- Johnson, Douglas and Steven Metz. "Civil-Military Relations in the United States: The State of the Debate." *The Washington Quarterly* 18, no. 1 (Winter 1995). <http://www.lexisnexis.com> (accessed 30 July 2009).
- Jumper, John. "Global Strike Task Force: A Transforming Concept, Forged by Experience." *Aerospace Power Journal* (Spring 2001): 24-33.
- Kelly, Justin and Michael J. Brennan. "The Leavenworth Heresy and the Perversion of the Operational Art." *Joint Force Quarterly* 56 (1st Quarter 2010): 104-116.
- Kohn, Richard H. "Out of Control." *The National Interest* 35 (Spring 1994): 3-17.
- Mansfield, Harvey C. "Civil-Military Relations in the United States." *Current History* 38 (April 1960): 228-233.
- Matthews, William. "Pumping up the Numbers." *Armed Forces Journal* (April 2008). <http://www.armedforcesjournal.com/2008/04/3392707/> (accessed 23 September 2009).
- Nielsen, Suzanne C. "Civil-Military Relations Theory and Military Effectiveness." *Policy and Management Review* 2, iss. 2 (2002): 1-21.

- Norris, Kathleen. "Civil-Military Relations: Educating U.S. Air Force Officers at the Graduate Level." Paper Presented to the 48th Annual International Studies Association Convention. Chicago, Illinois. March 2007.
http://www.allacademic.com/meta/p_mla_apa_research_citation/1/7/9/5/0/pages179502/p179502-1.php (accessed 3 February 2010).
- Perry, Chris. Presentation to Joint Advanced Warfighting School, Norfolk, Virginia. 13 December 2009.
- Pierce, Albert. Presentation to the Joint Advanced Warfighting School. Norfolk, Virginia. 15 December 2009.
- Powell, Colin L. "U.S. Forces: Challenges Ahead." *Foreign Affairs* (Winter 1992/93): 32-45.
- Snider, Don M. "America's Postmodern Military." *World Policy Journal* 17, iss. 1 (Spring 2000). <http://www.proquest.com/> (accessed 30 July 2009).
- Snider, Don M., Robert F. Priest and Felisa Lewis. "The Civilian-Military Gap and Professional Military Education at the Precommissioning Level." *Armed Forces and Society* 27, no. 2 (Winter 2001): 249-272.
- Stiehm, Judith Hicks. "Civil-Military Relations in War College Curricula." *Armed Forces and Society* 27, no. 2 (Winter 2001): 273-294.
- Strachan, Hew. "Making Strategy: Civil-Military Relations after Iraq." *Survival* 48, no. 3 (Autumn 2006): 59-82.
- Welch, David A. and Noboru Yamaguchi. "Soldiers, Civilians, and Scholars: Making Sense of the Relationship between Civil-Military Relations and Foreign Policy." *Asian Perspective* 29, no. 1 (2005): 213-232.
- Zinni, Anthony. Presentation to the Joint Advanced Warfighting School. Norfolk, Virginia. 14 December 2009.

Magazine Articles (print and online)

- Allen, Mike. "Gates Agrees to Stay on Under Obama." *politico.com*. 25 November 2008. <http://www.politico.com/news/stories/1108/15986.html> (accessed 24 November 2009).
- "Budget wars." *Flight International*. 14-20 February 2006.
<http://www.flightglobal.com/articles/2006/02/14/204666/budget-wars.html>
 (accessed 2 February 2010).

- Barry, John. "Deplaned: Behind Defense Secretary Gates's Air Force Shake-up." *newsweek.com*. 6 June 2008. <http://www.newsweek.com/id/140276/> (accessed 11 November 2009).
- Burnham, Rick. "Jumper New AF Chief of Staff." *Airman Magazine*. 1 October 2001.
- Chapman, Suzann. "Jumper: 339 Is Minimum for F-22." *Air Force Magazine*. October 2002.
- Chavanne, Bettina H. "General: We Will Find a Way to Buy 380 F-22s." *aviationweek.com*. 13 February 2008. <http://www.aviationweek.com/aw/generic/story.jsp?id=news/MORE02138.xml&headline=USAF%20General:%20We%20Will%20Find%20A%20Way%20To%20Buy%20380%20F-22s&channel=defense> (accessed 4 November 2009).
- Dudney, Robert S. "The F-35 Dice Roll." *Air Force Magazine*. December 2002.
- "F/A-22 IOT&E Results." *codeonemagazine.com*. 1st Qtr 2005. http://www.codeonemagazine.com/events/jan_05/jan05_events02.html (accessed 2 November 2009).
- Fulghum, David A. and Robert Wall. "Is This War? Budget Battles are Taking Shape in Differences between the Military and Senior Pentagon Civilians." *Aviation Week & Space Technology*. 9 February 2004.
- Hebert, Adam J. "Heavy Duty Air Force." *Air Force Magazine*. April 2003.
- Hebert, Adam J. "It Means 'We Didn't Buy Enough.'" *Air Force Magazine*. July 2003.
- Kaplan, Fred. "Attack of the Drones: Now that Congress has Killed the F-22, the Air Force is Facing another Shock to the System: Planes without Pilots." *newsweek.com*. 19 September 2009. <http://www.newsweek.com/id/215825/page/2> (accessed 24 November 2009).
- Kaplan, Fred. "Rumsfeld Surrenders: The QDR Dashes his Dreams of Military Transformation." *slate.com*. 3 February 2006. <http://www.slate.com/toobar.aspx?action=print&id=2135343> (accessed 27 October 2009).
- "Modernization of the F-16 Fleet." *defense-update.com*. 6 November 2005. <http://www.defense-update.com/features/du-1-04/f-16-upgrades.htm> (accessed 7 December 2009).
- Schanz, Marc V. "2018 Still in Play for New Bomber?" *airforce-magazine.com*. 4 June 2008. <http://www.airforce-magazine.com/DRArchive/Pages/default.aspx> (accessed 19 October 2009).
- Selinger, Marc. "Roche: F/A-22's Readiness for Key Testing Phase is 'Iffy.'" *aviationweek.com*. 18 March 2004. <http://www.aviationweek.com/aw/generic/>

story_generic.jsp?channel=aerospacedaily&id=news/raptr03184.xml (accessed 2 November 2009).

Sirak, Michael C. "Air Force Reorganizes Maintenance Units." *airforce-magazine.com*. 20 May 2008. <http://www.airforce-magazine.com/DRArchive/Pages/2008/May%202008May%2020%202008/AirForceReorganizesMaintenanceUnits.aspx> (accessed 19 October 2009).

-----, "Honed to a Razor's Edge." *airforce-magazine.com*. 26 May 2009. [http://www.airforce-magazine.com/Features/modernization/Pages/HonedtoaRazor%E2%80%99s Edge.aspx](http://www.airforce-magazine.com/Features/modernization/Pages/HonedtoaRazor%E2%80%99s%20Edge.aspx) (accessed 7 December 2009).

Tirpak, John A. "War and Transformation." *Air Force Magazine*. October 2002.

-----, "The F/A-22 Gets Back on Track." *Air Force Magazine*. March 2003

Wilson, George C. "Can Pentagon Inc. Sell its IPO Reforms?" *National Journal*. 19 May 2001. <http://www.proquest.com/> (accessed November 2, 2009).

Online Resources

Globalsecurity.org, "F-15 Eagle: Service Life." No date. <http://www.globalsecurity.org/military/systems/aircraft/f-15-life.htm> (accessed 7 December 2009).

National Security Network. "Rejecting F-22, Senate Embraces 21st Century Defense Strategy." 22 July 2009. <http://www.nsnetwork.org/node/1368> (accessed 7 December 2009).

Carafano, James Jay. "First Echoes of a Hollow Force? Air Force Choices Make Little Sense." WebMemo #986. Heritage Foundation. 3 February 2006. <http://www.heritage.org/Research/NationalSecurity/wm986.cfm> (accessed 2 November 2009).

Clark, Colin. "Tanker Decision out of Air Force Hands." *military.com*. 9 July 2008. <http://www.military.com/news/article/pentagon-to-reopen-tanker-bidding.html?ESRC=airforce-a.nl> (accessed 24 November 2009).

Cordesman, Anthony H. and Hans Ulrich Kaeser. "America's Self-Destroying Airpower: Becoming Your Own Peer Threat." Center for Strategic and International Studies. Updated 16 December 2008. http://csis.org/files/media/csis/pubs/090223_aircraft_modernstudy.pdf (accessed 3 February 2010).

Cordesman, Anthony H. and Paul S. Frederiksen. "America's Uncertain Approach to Strategy and Force Planning." Center for Strategic and International Studies. Updated 9 February 2009. http://csis.org/files/media/csis/pubs/060705_strategy_force.pdf (accessed 2 November 2009).

Department of the Air Force. "T. Michael Moseley." <http://www.af.mil/information/bios/bio.asp?bioID=6545> (accessed 24 November 2009).

Department of Defense. "General Norton A. Schwartz: Chief of Staff U.S. Air Force." <http://www.defenselink.mil/bios/biographydetail.aspx?biographyid=92> (accessed 24 November 2009).

----- "Michael B. Donley: Secretary of the Air Force." <http://www.defenselink.mil/bios/biographydetail.aspx?biographyid=43> (accessed 23 November 2009).

Department of the Navy. "Total Ownership Cost." 11 February 2008. <http://www.navair.navy.mil/toc/home/faqs/faqs.html> (accessed 4 December 2009).

Korb, Lawrence. "The Best Weapons Money Can Buy." Center for American Progress. 13 August 2005. http://www.americanprogress.org/issues/2005/08/b837247_ct1327177.html (accessed 7 December 2009).

Korb, Lawrence J. and Krisila Benson. "A Jet Even the Military Doesn't Want: The F-22 Isn't Useful in Afghanistan or Iraq, Why would Congress Order More?" Center for American Progress. 9 July 2009. http://www.americanprogress.org/issues/2009/07/f22_oped.html (accessed 7 July 2009).

Project on Government Oversight. "Preying on the Taxpayer: The F-22A Raptor." Project on Government Oversight. 25 July 2006. <http://www.pogo.org/pogo-files/reports/national-security/f-22a-raptor/ns-f-22a-raptor-2006.html> (accessed 2 November 2009)

Sharp, Travis. "Lies, Damn Lies, and Defense Budgets." Center for Arms Control and Non-proliferation. 2 April 2009. <http://nukesofhazardblog.com/story/2009/4/2/133125/0101> (accessed 4 December 2009).

Stevenson, James. "F-22 Fighter Performance: How does the F-22A compare a quarter century later?" Straus Military Reform Project, Center for Defense Information. 2006. <http://www.cdi.org/pdfs/stevenson%20f-22%20brief.pdf> (accessed 2 November 2009).

Watts, Barry. "Backgrounder: The F-22 Program in Retrospect." Center for Strategic and Budgetary Assessments. August 2009. http://www.csbaonline.org/4Publications/PubLibrary/B.20090908.F-22_Program_in_Re/B.20090908.F-22_Program_in_Re.pdf (accessed 4 December 2009).

Governmental Reports

Bolkcom, Christopher. *F/A-22 Raptor*. Washington, DC: Congressional Research Service, 6 January 2005. <http://www.fas.org/man/crs/RL31673.pdf> (accessed 28 October 2009).

-----. *Tactical Aircraft Modernization: Issues for Congress*. Washington, DC: Congressional Research Service, 7 October 2005. <http://www.dtic.mil/cgi-in/GetTRDoc?AD=ADA443898&Location=U2&doc=GetTRDoc.pdf> (accessed 2 November 2009).

Bruner, Edward F. *Army Transformation and Modernization: Overview and Issues for Congress*. Washington, DC: Congressional Research Service, 24 January 2003. <http://www.au.af.mil/au/awc/awcgate/crs/rs20787.pdf> (accessed 25 January 2010).

Congressional Budget Office. *Reducing the Deficit: Spending and Revenue Options*. Washington, DC: Congressional Budget Office, March 1997. http://www.fas.org/man/congress/1997/cbo_deficit/index.html (accessed 4 December 2009).

Department of the Air Force, Deputy Assistant Secretary for Budget (SAF/FMB). *Committee Staff Procurement Backup Book: Fiscal Year (FY) 2010 Budget Estimates, Aircraft Procurement, Air Force*. Vol. 1. May 2009. <http://www.saffm.hq.af.mil/shared/media/document/AFD-090511-090.pdf> (accessed 4 December 2009).

Department of Defense. *Quadrennial Defense Review Report 1997*. Washington, DC: Department of Defense, 1997. <http://www.fas.org/man/docs/qdr/sec7.html> (accessed 23 October 2009).

-----. *Quadrennial Defense Review Report 2006*. Washington, DC: Department of Defense, 6 February 2006. <http://www.defense.gov/qdr/report/Report20060203.pdf> (accessed 2 February 2010).

General Accounting Office. *GAO Report to Congressional Committees, Bottom-Up Review: Analysis of Key DOD Assumptions*. Washington, DC: General Accounting Office, January 1995. <http://www.globalsecurity.org/military/library/report/gao/ns95056.pdf> (accessed 23 October 2009).

Government Accountability Office. *Defense Acquisitions: Production and Fielding of Missile Defense Components Continue with Less Testing and Validation Than Planned*. Washington, DC: Government Accountability Office, March 2009. <http://www.gao.gov/new.items/d09338.pdf> (accessed 4 December 2009).

O'Rourke, Ronald. *Air Force F-22 Fighter Program: Background and Issues for Congress*. Washington, DC: Congressional Research Service Report, 16 July

2009. http://assets.opencrs.com/rpts/RL31673_20090716.pdf (accessed 2 February 2010)

Peters, F. Whitten and Michael D. Ryan. *Air Force Posture Statement 2000*. Washington, DC: Department of the Air Force, 2000.
<http://armedservices.house.gov/omdocs/testimony/106thcongress/00-02-10ryan.htm> (accessed 28 October 2009).

Schwartz, Moshe. *Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process*. Washington, DC: Congressional Research Service, 10 July 2009. http://assets.opencrs.com/rpts/RL34026_20090710.pdf (accessed 2 February 2010).

U.S. Congress Conference Committee. *Nunn-McCurdy Amendment, Department of Defense Authorization Act (1982) Conference Report*. Report No. 97-311. 3 November 1981. <http://www.cdi.org/missile-defense/s815-conf-rpt.cfm> (accessed 29 October 2009).

Speeches, Transcripts, Memoranda, and Interviews

Air Combat Command Public Affairs. "F/A-22 Talking Points." Langley AFB, Virginia. July 2005.

Cohen, Bill. Letter to the House Appropriations Committee. 15 July 1999.
<http://www.cdi.org/issues/tacair/cohenltr15Jul99.html> (accessed 19 October 2009).

Corley, John D.W. Memorandum to The Honorable Saxby Chambliss. 9 June 2009.
http://www.militarytimes.com/static/projects/pages/061809af_corley.pdf (accessed 7 December 2009).

Coyle, Philip E. Memorandum for Under Secretary of Defense (Acquisition, Technology, and Logistics). "F-22 Test and Evaluation Status." 20 December 2000. http://www.d-n-i.net/fcs/pdf/ref_3_f-22_coyle_memo.pdf (accessed 2 November 2009).

Office of the Assistant Secretary of Defense for Public Affairs. "Defense Budget Recommendation Statement." 6 April 2009. <http://www.defenselink.mil/speeches/speech.aspx?speechid=1341> (accessed 25 August 2009).

-----, "DoD Media Roundtable with Secretary Gates and Gen. Pace in the Pentagon Briefing Room." 29 June 2007. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4004> (accessed 4 November 2009).

- , "DoD News Briefing - Rear Adm. Craig R. Quigley." 6 February 2001. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=930> (accessed 28 October 2001).
- , "DoD News Briefing with Admiral Mullen from the Pentagon." 10 December 2008. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4330> (accessed 24 November 2009).
- , "DoD New Briefing with Secretary Gates from the Pentagon." 5 June 2009. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4236> (accessed 26 August 2009).
- , "DoD News Briefing with Secretary Gates at the Pentagon." 6 April 2009. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4396> (accessed 23 September 2009).
- , "Media Availability with Secretary of Defense Robert Gates En Route to Colorado Springs, Colorado." 10 June 2008. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4240> (accessed 26 August 2009).
- , "Media Roundtable with Secretary of Defense Robert Gates and General James Cartwright, Vice Chairman, Joint Chiefs of Staff and Selected Reporters." 7 April 2009. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4399> (accessed 24 November 2009).
- , "Remarks to Air War College." 21 April 2008. <http://www.defenselink.mil/speeches/speech.aspx?speechid=1231> (accessed 25 August 2009).
- , "Remarks to the Heritage Foundation." 13 May 2009. <http://www.defenselink.mil/speeches/speech.aspx?speechid=1240> (accessed 25 August 2009).
- , "Remarks to Langley Airmen." 9 June 2008. <http://www.defenselink.mil/speeches/speech.aspx?speechid=1256> (accessed 25 August 2009).
- , "Secretary Gates Remarks at the Air Force Association's Annual Conference." 16 September 2009. <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=4478> (accessed 24 November 2009).
- , "Testimony [of Secretary of Defense Donald H. Rumsfeld] Prepared for Delivery on the 2002 Defense Department Amended Budget to the House Appropriations Committee." 16 July 2001. <http://www.defenselink.mil/speeches/speech.aspx?speechid=405> (accessed 27 October 2009).
- , "Welcoming Ceremony for Air Force Chief of Staff Norton Schwartz." 12 August 2008. <http://www.defenselink.mil/speeches/speech.aspx?speechid=1267> (accessed 25 August 2009).

- Rumsfeld, Donald. Interview by Jim Lehrer. *News Hour*. PBS. 14 February 2001. http://www.pbs.org/newshour/bb/military/jan-june01/rumsfeld_2-14.html (accessed 27 October 2009).
- Schwartz, Norton A. and Michael B. Donley. Memorandum to The Honorable John McCain. 13 July 2009. http://mccain.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=5278b80d-d69d-43d6-904f-6a0b37b3a099 (accessed 25 January 2010).
- Schwartz, Norton. "International Relationships: Toward a Twenty-First Century Security." Speech to the International Fellows Program Alumni Dinner. Washington, DC: 1 October 2009. <http://www.af.mil/information/speeches/speech.asp?id=514> (accessed 9 December 2009).
- Shinseki, Eric. Memorandum to the Secretary of Defense. "End of Tour Memorandum." 10 June 2003. <http://media.washingtonpost.com/wp-srv/opinions/documents/shinseki.pdf> (accessed 25 January 2010).
- Stearns, Clifford. "Air Force General Moseley and Secretary Wynne should be Honored, not Fired." *Congressional Record*. Section 51. 16 July 2008. <http://www.govtrack.us/congress/record.xpd?id=110-h20080716-51> (accessed 11 November 2009).
- Thole, David and Alexis Grynkewich. Interview by Greta van Susteren. *On the Record*. Fox News. 28 June 2004.
- U.S. House Armed Services Committee. *Statement of General John Jumper on Operations in Kosovo: Problems Encountered, Lessons Learned and Reconstitution*. 26 October 1999. <http://www.fas.org/man/congress/1999/99-10-26jumper.htm> (accessed 23 September 2009).
- U.S. House Armed Services Subcommittee on Air and Land Forces. *Statement of Lieutenant General Mark D. Shackelford*. 25 March 2009. http://appropriations.house.gov/witness_testimony/DE/Mark_Shackelford_03_25_09.pdf (accessed 7 December 2009).
- U.S. Senate. *Statement of Senator Orrin G. Hatch on the F-22A Raptor*. 16 July 2009. http://www.afa.org/edop/2009/OGH_Statement.PDF (accessed 24 November 2009).
- U.S. Senate Committee on Armed Services. *Hearing to Receive Testimony of the Department of the Air Force in Review of the Defense Authorization Request for Fiscal Year 2009 and the Fiscal Years Defense Program*. 5 March 2008. <http://armed-services.senate.gov/Transcripts/2008/03%20March/A%20Full%20Committee/08-17%20-%203-5-08.pdf> (accessed 4 November 2009).

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ACADEMIC BACKGROUND

2006	Air War College (Correspondence) , Air University, Maxwell AFB, AL
2006	Master of Arts in Security Studies/Homeland Security (distinguished graduate), Naval Postgraduate School, Monterey, CA 2006
2003	Air Command & Staff College (Correspondence) , Air University, Maxwell AFB, AL
1994	Master of Arts in History (Vincent Award), University of Georgia, Athens, GA
1993	Bachelor of Science in Military History (military distinction), United States Air Force Academy, Colorado Springs, CO

EMPLOYMENT HISTORY

Lieutenant Colonel, United States Air Force

Jul 09-present	Student, Joint Advanced Warfighting School, Joint Forces Staff College, Norfolk, VA
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Jan 07-Dec 07	Chief, Interoperability Branch, 5 th Generation Fighter Division, Dir of Requirements and Executive Officer, Dir of Requirements, Air Combat Command, Langley AFB, VA
Sep 05-Dec 06	Student, Naval Postgraduate School, Monterey, CA
Dec 04-Sep 05	Director of Operations, 59 th Test and Evaluation Squadron, Nellis AFB, NV
Jan 03-Nov 04	Operational Test and Evaluation Instructor Pilot, 422d Test and Evaluation Squadron and Special Assistant to the Commander, Flight Examiner and Chief, F-22A Standardization/ Evaluation, 53d Test and Evaluation Group, Nellis AFB, NV
Jan 02-Dec 03	Chief, Weapons and Tactics, 80 th Fighter Squadron, Kunsan AB, ROK
Jul 01-Dec 01	F-16 Weapons Instructor Course, Class 01BIF, Nellis AFB, NV
Aug 99-Jun 01	Assistant Chief of Standardization/Evaluation, Flight Examiner, and Flight Commander, 421 st Fighter Squadron, Hill AFB, UT
Aug 96-Jul 99	Assistant Plans Officer, Chief of Training, Mission Commander, 18 th Fighter Squadron, Eielson AFB, AK

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1998-1999 Instructor, American and World History, Wayland Baptist University, Eielson AFB, AK

PUBLICATIONS

"Handmaid of the Army: the American Perception of German Bombardment Doctrine prior to the Battle of Britain," *Airpower Journal*, Summer 1997.

(SECRET) "Find the Enemy: APG-68 Threat Aircraft Detection Ranges," *USAF Weapons Review*, Spring 2002.

(SECRET) "Air Dominance for the 21st Century," *USAF Weapons Review*, Spring 2004 (with Michael Shower)

"Modeling Jihad: A System Dynamics Model of the Salafist Group for Preaching and Combat Financial Subsystem," *Strategic Insights* V, issue. 8, November 2006 (with Chris Reifel).

"Maritime Homeland Defense: A Role for Land-based Airpower?" *Air & Space Power Journal*, Winter, 2007.

"Welfare as Warfare: How Violent Non-State Groups Use Social Services to Attack the State," *Studies in Conflict and Terrorism* 31, no. 4, 2008.